STIC Search Report
EIC 1700

USPTO

STIC Database Tracking Number: 154275

TO: John Hardee
Location: REM 9A41
Art Unit : 1751
June 3, 2005

Case Serial Number: 10/738492

From: Usha Shrestha
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-3519
usha.shrestha@uspto.gov

Search Notes

Jeff Boucher
513 627-4597
Jerry Yetter
6/28/05

12/30/02
6448210 cip
GB 2354771
6083584

Access DB# 154215

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Heidi Examiner # : _____ Date: 5/24/05
Art Unit: 1751 Phone Number 30 21318 Serial Number: 10/738,492
Mail Box and Bldg/Room Location: 9A41 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

SCIENTIFIC REFERENCE BR
Sci & Tech Inf Ctr
MAY 24 RECD
Pat. & T.M. Office

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Whatever you can find.
Thanks

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: Usha	NA Sequence (#) _____	STN 615.87
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: 6/3/05	Bibliographic _____	Dr.Link _____
Date Completed: 6/3/05	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: 60	Fulltext _____	Sequence Systems _____
Clerical Prep Time: 30	Patent Family _____	WWW/Internet _____
Online Time: 180	Other _____	Other (specify) _____

PTO-1590 (8-01)

STIC Search Results Feedback Form

USPTO

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 17:10:42 ON 03 JUN 2005

=> d his ful

     FILE 'HCAPLUS' ENTERED AT 14:00:55 ON 03 JUN 2005
L1             1 SEA ABB=ON  PLU=ON  US20040176269/PN
                 D SCAN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 14:01:29 ON 03 JUN 2005
L2            31 SEA ABB=ON  PLU=ON  (10043-35-3/BI OR 10380-06-0/BI OR
                 1314-13-2/BI OR 1332-07-6/BI OR 13770-90-6/BI OR
                 16039-53-5/BI OR 2452-01-9/BI OR 2847-05-4/BI OR
                 4468-02-4/BI OR 50-21-5/BI OR 526-95-4/BI OR 5329-14-6/
                 BI OR 551-64-4/BI OR 553-72-0/BI OR 557-34-6/BI OR
                 557-41-5/BI OR 56-84-8/BI OR 56-86-0/BI OR 64-18-6/BI
                 OR 64-19-7/BI OR 65-85-0/BI OR 6915-15-7/BI OR
                 7646-85-7/BI OR 7647-01-0/BI OR 7664-93-9/BI OR
                 7697-37-2/BI OR 7699-45-8/BI OR 7733-02-0/BI OR
                 7779-88-6/BI OR 7789-31-3/BI OR 87-69-4/BI)
                 D SCAN
                 E ZINC OXIDE/CN
L3             1 SEA ABB=ON  PLU=ON  "ZINC OXIDE"/CN
                 D RN
L4             1 SEA ABB=ON  PLU=ON  1314-13-2/RN
                 D SCAN
L5             1 SEA ABB=ON  PLU=ON  50-21-5/RN
L6             1 SEA ABB=ON  PLU=ON  56-84-8/RN
L7             1 SEA ABB=ON  PLU=ON  56-86-0/RN
L8             1 SEA ABB=ON  PLU=ON  64-18-6/RN
L9             1 SEA ABB=ON  PLU=ON  65-85-0/RN
L10            1 SEA ABB=ON  PLU=ON  87-69-4/RN
L11            1 SEA ABB=ON  PLU=ON  526-95-4/RN
L12            1 SEA ABB=ON  PLU=ON  5329-14-6/RN
L13            1 SEA ABB=ON  PLU=ON  6915-15-7/RN
L14            1 SEA ABB=ON  PLU=ON  7647-01-0/RN
L15            1 SEA ABB=ON  PLU=ON  7664-93-9/RN
L16            1 SEA ABB=ON  PLU=ON  7697-37-2/RN
L17            1 SEA ABB=ON  PLU=ON  7789-31-3/RN
L18            1 SEA ABB=ON  PLU=ON  10043-35-3/RN
L19           14 SEA ABB=ON  PLU=ON  (L5 OR L6 OR L7 OR L8 OR L9 OR L10
                 OR L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR
                 L18)
L20            1 SEA ABB=ON  PLU=ON  WATER/CN
                 D RN
L21            1 SEA ABB=ON  PLU=ON  7732-18-5/RN
L22            1 SEA ABB=ON  PLU=ON  64-19-7/RN
L23           15 SEA ABB=ON  PLU=ON  L19 OR L22
L24            1 SEA ABB=ON  PLU=ON  551-64-4/RN
                 D SCAN
L25            1 SEA ABB=ON  PLU=ON  553-72-0/RN
L26            1 SEA ABB=ON  PLU=ON  557-34-6/RN
L27            1 SEA ABB=ON  PLU=ON  557-41-5/RN
L28            1 SEA ABB=ON  PLU=ON  1332-07-6/RN
L29            1 SEA ABB=ON  PLU=ON  2452-01-9/RN
L30            1 SEA ABB=ON  PLU=ON  2847-05-4/RN
L31            1 SEA ABB=ON  PLU=ON  4468-02-4/RN
L32            1 SEA ABB=ON  PLU=ON  7646-85-7/RN
L33            1 SEA ABB=ON  PLU=ON  7699-45-8/RN
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L34           1 SEA ABB=ON  PLU=ON  7733-02-0/RN
L35           1 SEA ABB=ON  PLU=ON  7779-88-6/RN
L36           1 SEA ABB=ON  PLU=ON  10380-06-0/RN
L37           1 SEA ABB=ON  PLU=ON  13770-90-6/RN
L38           1 SEA ABB=ON  PLU=ON  16039-53-5/RN
L39          15 SEA ABB=ON  PLU=ON  (L24 OR L25 OR L26 OR L27 OR L28
                OR L29 OR L30 OR L31 OR L32 OR L33 OR L34 OR L35 OR
                L36 OR L37 OR L38)

     FILE 'HCAPLUS' ENTERED AT 15:09:50 ON 03 JUN 2005
L40       41945 SEA ABB=ON  PLU=ON  L39
L41      489820 SEA ABB=ON  PLU=ON  L23
L42      351611 SEA ABB=ON  PLU=ON  L21
L43       74504 SEA ABB=ON  PLU=ON  L4
L44         108 SEA ABB=ON  PLU=ON  L41 AND L42 AND L43
L45       58441 SEA ABB=ON  PLU=ON  (CLEAN? OR CLEANER? OR CLEANSER?
                OR LAUND? OR DISHWASH? OR DETERG? OR ABSTERG?)(2A)(MIX?
                 OR BLEND? OR COMPOSIT? OR COMPN# OR COMPSN# OR
                FORMULAT? OR SOLUTION? OR SOLN# OR LIQ# OR LIQUID#)
L46           1 SEA ABB=ON  PLU=ON  L44 AND L45
                D SCAN
L47         161 SEA ABB=ON  PLU=ON  L40 AND L45
L48           1 SEA ABB=ON  PLU=ON  L47 AND L1
                D QUE L46
L49     3620655 SEA ABB=ON  PLU=ON  L21 OR AQ# OR AQUEOUS? OR H2O OR
                WATER?

     FILE 'REGISTRY' ENTERED AT 15:55:40 ON 03 JUN 2005
L50         112 SEA ABB=ON  PLU=ON  (ZN(L)O)/ELS(L)2/ELC.SUB

     FILE 'HCAPLUS' ENTERED AT 16:02:32 ON 03 JUN 2005
L51       75175 SEA ABB=ON  PLU=ON  L50
L52       82880 SEA ABB=ON  PLU=ON  (ZINC OR ZN)(W)(OXIDE? OR DIOXIDE?
                OR TRIOXIDE?)
L53       93320 SEA ABB=ON  PLU=ON  L43 OR L51 OR L52
L54        1288 SEA ABB=ON  PLU=ON  L53 AND L41 AND L49
L55          14 SEA ABB=ON  PLU=ON  L54 AND L45
                D SCAN TI
L56          57 SEA ABB=ON  PLU=ON  L40(L)L45
L57          39 SEA ABB=ON  PLU=ON  L56 AND DETERG?/SC
L58           1 SEA ABB=ON  PLU=ON  L57 AND L1
L59          37 SEA ABB=ON  PLU=ON  L57 NOT L55
                D SCAN L55 TI
L60           2 SEA ABB=ON  PLU=ON  L55 AND DETERG?/SC
                D SCAN
L61          39 SEA ABB=ON  PLU=ON  L57 OR L60
                D SCAN TI
L62      124447 SEA ABB=ON  PLU=ON  ZNO OR (ZINC OR ZN)(W)(OXIDE? OR
                DIOXIDE? OR TRIOXIDE)
L63      128781 SEA ABB=ON  PLU=ON  L43 OR L51 OR L62
L64         127 SEA ABB=ON  PLU=ON  L63 AND L41 AND L42
L65           0 SEA ABB=ON  PLU=ON  L64 AND DETERG?/SC
L66        3681 SEA ABB=ON  PLU=ON  L63 AND L41
L67          29 SEA ABB=ON  PLU=ON  L66 AND L45
L68           7 SEA ABB=ON  PLU=ON  L67 AND DETERG?/SC
                D SCAN TI
L69          42 SEA ABB=ON  PLU=ON  L61 OR L68
L70          76 SEA ABB=ON  PLU=ON  L47 AND DETERG?/SC
                D FHITSTR
L71          24 SEA ABB=ON  PLU=ON  L70 AND (DISH? OR DISH?(A)WASH?)
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L72          53 SEA ABB=ON  PLU=ON  L69 OR L71
                D FHITSTR
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FILE 'REGISTRY' ENTERED AT 17:10:42 ON 03 JUN 2005

FILE HCAPLUS


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=> d que l57
L24            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  551-64-4/RN
L25            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  553-72-0/RN
L26            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  557-34-6/RN
L27            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  557-41-5/RN
L28            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  1332-07-6/RN
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  2452-01-9/RN
L30            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  2847-05-4/RN
L31            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  4468-02-4/RN
L32            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7646-85-7/RN
L33            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7699-45-8/RN
L34            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7733-02-0/RN
L35            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7779-88-6/RN
L36            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  10380-06-0/RN
L37            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  13770-90-6/RN
L38            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  16039-53-5/RN
L39           15 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L24 OR L25 OR L26
                  OR L27 OR L28 OR L29 OR L30 OR L31 OR L32 OR L33 OR
                  L34 OR L35 OR L36 OR L37 OR L38)
L40        41945 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L39
L45        58441 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (CLEAN? OR CLEANER?
                  OR CLEANSER? OR LAUND? OR DISHWASH? OR DETERG? OR
                  ABSTERG?)(2A)(MIX? OR BLEND? OR COMPOSIT? OR COMPN# OR
                  COMPSN# OR FORMULAT? OR SOLUTION? OR SOLN# OR LIQ# OR
                  LIQUID#)
L56           57 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L40(L)L45
L57           39 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L56 AND DETERG?/SC


=> d que l68
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  1314-13-2/RN
L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-21-5/RN
L6             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  56-84-8/RN
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  56-86-0/RN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  64-18-6/RN
L9             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  65-85-0/RN
L10            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  87-69-4/RN
L11            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  526-95-4/RN
L12            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  5329-14-6/RN
L13            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  6915-15-7/RN
L14            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7647-01-0/RN
L15            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7664-93-9/RN
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L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7697-37-2/RN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  7789-31-3/RN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  10043-35-3/RN
L19          14 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L5 OR L6 OR L7 OR
                L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR L15 OR
                L16 OR L17 OR L18)
L22           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  64-19-7/RN
L23          15 SEA FILE=REGISTRY ABB=ON  PLU=ON  L19 OR L22
L41      489820 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23
L43       74504 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4
L45       58441 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (CLEAN? OR CLEANER?
                OR CLEANSER? OR LAUND? OR DISHWASH? OR DETERG? OR
                ABSTERG?)(2A)(MIX? OR BLEND? OR COMPOSIT? OR COMPN# OR
                COMPSN# OR FORMULAT? OR SOLUTION? OR SOLN# OR LIQ# OR
                LIQUID#)
L50         112 SEA FILE=REGISTRY ABB=ON  PLU=ON  (ZN(L)O)/ELS(L)2/ELC.
                SUB
L51       75175 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50
L62      124447 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZNO OR (ZINC OR
                ZN)(W)(OXIDE? OR DIOXIDE? OR TRIOXIDE)
L63      128781 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 OR L51 OR L62
L66        3681 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63 AND L41
L67          29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L66 AND L45
L68           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L67 AND DETERG?/SC


=>  fil hcap
FILE 'HCAPLUS' ENTERED AT 17:11:50 ON 03 JUN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)


=> => d l72 1-53 ibib abs hitstr hitind

L72  ANSWER 1 OF 53  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2005:371365  HCAPLUS
DOCUMENT NUMBER:          142:413352
TITLE:                    Complete-cycle methods for protecting
                          glassware from surface corrosion in automatic
                          dishwashing appliances with
                          zinc-containing composition and soluble metal
                          salt containing rinse aid
INVENTOR(S):              Song, Brian Xiaoqing; Berger, Patricia Sara;
                          Schwartz, James Robert; Corkery, Robert
                          William
PATENT ASSIGNEE(S):       The Procter & Gamble Company, USA
SOURCE:                   PCT Int. Appl., 42 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    --------------------
     --------
     WO 2005037978         A1    20050428    WO 2004-US34553
                                                                   2004
```

1018

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

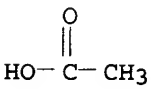
PRIORITY APPLN. INFO.: US 2003-511768P P 2003 1016

AB Complete-cycle methods for protecting glassware from corrosion in automatic **dishwashing** appliances use a through-the-wash **detergent composition**, especially **detergent compns.** comprising zinc-containing materials, in combination with a rinse aid composition, especially rinse aid compns. comprising at least one water-soluble metal salt. Such a domestic, institutional, industrial, and/or com. complete-cycle method of treating glassware surfaces in automatic **dishwashing** comprises the steps of: (a) providing a through-the-wash **detergent composition** comprising an effective amount of a particulate zinc-containing material; (b) providing a rinse aid composition comprising an effective amount of at least one metal salt; (c) contacting said glassware surface with said through-the-wash **detergent composition**; and (d) contacting said glassware surface with said rinse aid composition in the rinse cycle.

IT **557-34-6**, Zinc acetate **557-41-5**, Zinc formate **2847-05-4**, Zinc malate **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate **7779-88-6**, Zinc nitrate
(methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



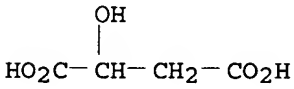
●1/2 Zn

RN 557-41-5 HCAPLUS

CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

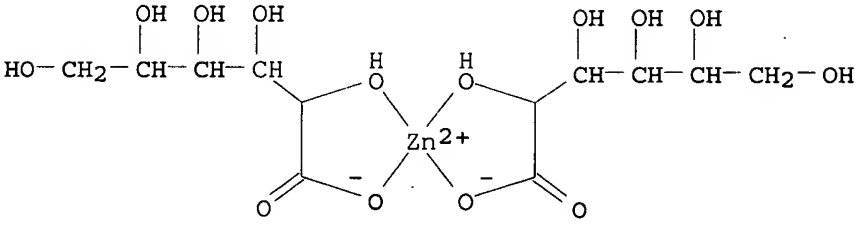
●1/2 Zn

RN 2847-05-4 HCAPLUS
CN Butanedioic acid, hydroxy-, zinc salt (1:1) (9CI) (CA INDEX NAME)



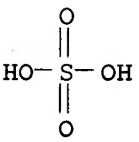
● Zn

RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



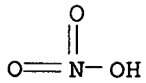
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D003-02
ICS C11D003-20; C11D003-10; C11D001-66
CC 46-6 (Surface Active Agents and **Detergents**)
ST glassware protection zinc contg **dishwashing** detergent rinse aid
IT Phyllosilicate minerals
(containing Zn2+ ions; methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)
IT Detergents
(**dishwashing**; methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)
IT Household furnishings
(eating utensils, glassware; methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)
IT Corrosion inhibitors
Corrosion prevention
(methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)
IT Detergents
(rinse aids; methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)
IT 25751-21-7, Acrylic acid-methacrylic acid copolymer
(dispersant, rinse aid; methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)
IT **557-34-6**, Zinc acetate **557-41-5**, Zinc formate **2847-05-4**, Zinc malate **4468-02-4**, Zinc gluconate 5263-02-5, Zinc carbonate hydroxide (Zn5(CO3)2(OH)6) 6919-20-6 **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate **7779-88-6**, Zinc nitrate 12122-17-7, Hydrozincite 12199-19-8, Rosasite 55802-61-4, Zinc chloride hydroxide 55802-63-6, Zinc hydroxide sulfate 395074-43-8, Zinc hydroxide nitrate 850444-43-8
(methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)
IT 50-21-5, Lactic acid, uses 56-84-8, Aspartic acid, uses 56-86-0, Glutamic acid, uses 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 65-85-0, Benzoic acid, uses

77-92-9, Citric acid, uses 87-69-4, Tartaric acid, uses
526-95-4, D-Gluconic acid 5329-14-6, Sulfamic acid 6915-15-7,
Malic acid 7647-01-0, Hydrochloric acid, uses 7664-93-9,
Sulfuric acid, uses 7697-37-2, Nitric acid, uses 7789-31-3,
Bromic acid 10043-35-3, Boric acid, uses
(rinse aid; methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)

IT 12172-81-5, Aurichalcite
(zinc copper carbonate hydroxide; methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 2 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:371362 HCAPLUS
DOCUMENT NUMBER: 142:394187
TITLE: Composition for protection of glassware in **dishwashers** containing zinc and bismuth
INVENTOR(S): Hahn, Karlheinz Ulrich Gerhard; Werner, Karin
PATENT ASSIGNEE(S): Reckitt Benckiser N.V., Neth.; Reckitt Benckiser Uk Limited
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005037975	A1	20050428	WO 2004-GB4410	2004 1018

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: GB 2003-24295 A 2003 1017
GB 2004-4469 A 2004 0228

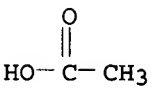
AB A composition comprises zinc and bismuth is for use in the protection

of glassware in an automatic **dishwashing** process from detrimental effects caused by exposure to aluminum. The ratio of zinc to bismuth in the composition is from 1:100 to 100:1 (based on mass of the metals), more preferably, from 1:10 to 10:1, more preferably from 1:5 to 5:1 and most preferably about 1:1, wherein they are in metallic form, an alloy, or as a salt or compound such as a nitrate, oxide, sulfate, phosphate, halide, carbonate or carboxylate salt.

IT **557-34-6**, Zinc acetate
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D003-00
ICS C11D003-02

CC 46-6 (Surface Active Agents and **Detergents**)

ST zinc bismuth aluminum prevention glassware corrosion; automatic **dishwasher** zinc bismuth silicate prevention corrosion

IT Corrosion inhibitors
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)

IT Glass, uses
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)

IT **Detergents**
(**dishwashing**, tablet; **composition** for protection of glassware in **dishwashers** containing zinc and bismuth)

IT Household furnishings
(eating utensils, glasses; composition for protection of glassware in **dishwashers** containing zinc and bismuth)

IT **557-34-6**, Zinc acetate 813-93-4, Bismuth citrate 7429-90-5, Aluminum, uses 13870-28-5, Sodium disilicate
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)

IT 1304-76-3, Bismuth oxide, uses 1314-13-2, Zinc oxide, uses
(glass; composition for protection of glassware in **dishwashers** containing zinc and bismuth)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 3 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:78197 HCAPLUS

DOCUMENT NUMBER: 142:137155

TITLE: **Dishwashing detergent composition** and methods for manufacturing and using

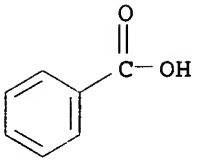
INVENTOR(S): Smith, Kim R.; Olson, Keith E.; Kestell, Howie; Bartelme, Michael J.; Lentsch, Steven

E.; Man, Victor F.; Baum, Burton M.; Everson, Terence P.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of Ser. No. US 2003-612474, filed on 2 Jul 2003
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005020464	A1	20050127	US 2004-877049	2004 0625
US 2005003979	A1	20050106	US 2003-612474	2003 0702
PRIORITY APPLN. INFO.:			US 2003-612474 A2	2003 0702

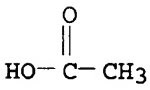
AB The warewashing **detergent composition** for use in automatic **dishwashing** machines includes a cleaning agent, an alkaline source, and a corrosion inhibitor. Such a warewashing **detergent composition** comprising: (a) a cleaning agent comprising a detersive amount of a surfactant; (b) an alkaline source in an amount effective to provide a use composition having a pH of at least about 8 and obtained by diluting the warewashing **detergent composition** with water; and (c) a corrosion inhibitor in an amount sufficient for reducing corrosion of glass, wherein the corrosion inhibitor comprising: (i) a source of aluminum ion; (ii) a source of zinc ion; and (iii) wherein the source of aluminum ion and the source of zinc ion are present in amts. sufficient to provide a use composition having a weight ratio of zinc ion to aluminum ion of at least about 2:1. The relative amts. of the source of zinc ion and the source of aluminum ion can be controlled to reduce visible filming when the warewashing **detergent composition** is used in the presence of hard water. Methods for using and manufacturing a warewashing **detergent composition** are provided.

IT **553-72-0**, Zinc benzoate **557-34-6**, Zinc acetate **557-41-5**, Zinc formate **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7699-45-8**, Zinc bromide **7733-02-0**, Zinc sulfate **7779-88-6**, Zinc nitrate **16039-53-5**, Zinc lactate
(**dishwashing detergent composition** and methods for manufacturing and using)
RN 553-72-0 HCAPLUS
CN Benzoic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



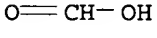
●1/2 Zn

RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



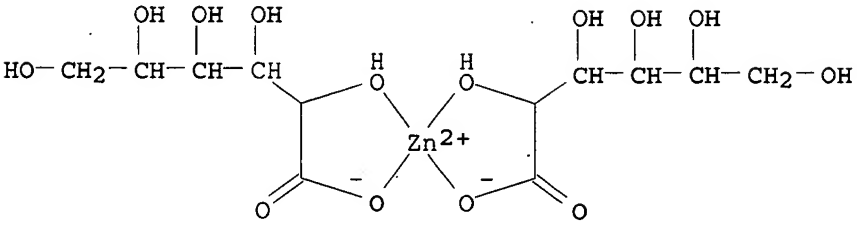
●1/2 Zn

RN 557-41-5 HCAPLUS
CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

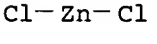


●1/2 Zn

RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)

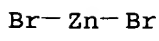


RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

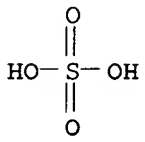


RN 7699-45-8 HCAPLUS

CN Zinc bromide (ZnBr2) (9CI) (CA INDEX NAME)

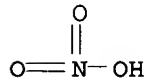


RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



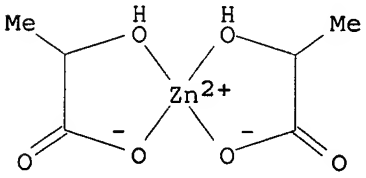
● Zn

RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

RN 16039-53-5 HCAPLUS
CN Zinc, bis[2-(hydroxy-κO)propanoato-κO]-, (T-4)- (9CI)
(CA INDEX NAME)



IC ICM C11D001-00
INCL 510220000
CC 46-6 (Surface Active Agents and **Detergents**)
ST aluminum zinc ion corrosion inhibitor **dishwashing** detergent; alk **dishwashing** detergent aluminum zinc contg
IT **Detergents**
(**dishwashing**, granular; **composition** and methods for manufacturing and using)
IT **Detergents**
(**dishwashing, liquid**; **composition** and methods for manufacturing and using)
IT 139-12-8, Aluminum acetate 144-55-8, Sodium bicarbonate, uses
298-14-6, Potassium bicarbonate 497-19-8, Sodium carbonate, uses

533-96-0, Sodium sesquicarbonate 546-46-3, Zinc citrate
553-72-0, Zinc benzoate **557-34-6**, Zinc acetate
557-41-5, Zinc formate 557-42-6, Zinc thiocyanate
584-08-7, Potassium carbonate 688-37-9, Aluminum oleate
815-78-1, Aluminum tartrate 1310-58-3, Potassium hydroxide, uses
1310-73-2, Sodium hydroxide, uses 1314-13-2, Zinc oxide, uses
1335-30-4, Aluminum silicate 1344-28-1, Aluminum oxide, uses
4468-02-4, Zinc gluconate 7360-53-4, Aluminum formate
7446-70-0, Aluminum chloride, uses **7646-85-7**, Zinc chloride, uses **7699-45-8**, Zinc bromide 7727-15-3, Aluminum bromide **7733-02-0**, Zinc sulfate
7779-88-6, Zinc nitrate 7783-49-5, Zinc fluoride
7784-23-8, Aluminum iodide 7784-30-7, Aluminum phosphate
10043-01-3, Aluminum sulfate 10043-52-4, Calcium chloride, uses
10043-67-1, Aluminum potassium sulfate 10139-47-6, Zinc iodide
10361-95-2, Zinc chlorate 11121-16-7, Aluminum borate
11126-29-7, Zinc silicate 11126-81-1 11138-49-1, Sodium aluminate 13473-90-0, Aluminum nitrate 14018-95-2, Zinc dichromate 14519-07-4, Zinc bromate 15477-33-5, Aluminum chlorate **16039-53-5**, Zinc lactate 16283-36-6, Zinc salicylate 16871-71-9, Zinc fluosilicate 18917-91-4, Aluminum lactate 22992-10-5, Aluminum zinc sulfate 37224-32-1, Sodium zincate 37275-76-6, Zinc aluminate 101508-09-2, Potassium sesquicarbonate
(**dishwashing detergent composition** and methods for manufacturing and using)

IT 9002-89-5, Polyvinyl alcohol
(water-soluble packaging material; **dishwashing detergent composition** and methods for manufacturing and using)

L72 ANSWER 4 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:15923 HCAPLUS
DOCUMENT NUMBER: 142:96381
TITLE: Warewashing **detergent composition** containing a mixture of aluminum and zinc ions for use in automatic **dishwashing** machines
INVENTOR(S): Lentsch, Steven E.; Bartelme, Michael J.; Man, Victor F.; Baum, Burton M.; Everson, Terence P.
PATENT ASSIGNEE(S): Ecolab Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005003979	A1	20050106	US 2003-612474	2003 0702
US 2005020464	A1	20050127	US 2004-877049	2004 0625
WO 2005005589	A1	20050120	WO 2004-US20774	2004

0628

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,
ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,
CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI,
CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

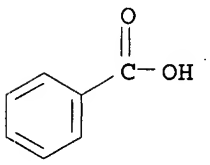
PRIORITY APPLN. INFO.: US 2003-612474 A2
2003
0702

AB The **composition** includes a **cleaning** agent, an alkaline source, and a corrosion inhibitor. The cleaning agent comprises a detersive amount of a surfactant. The alkaline source is provided in an amount effective to provide a use solution having a pH of at least about 8. The corrosion inhibitor includes a source of aluminum ion and a source of zinc ion. Methods for using and manufacturing a warewashing **detergent composition** are provided.

IT **553-72-0**, Zinc benzoate **557-34-6**, Zinc acetate **557-41-5**, Zinc formate **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7699-45-8**, Zinc bromide **7733-02-0**, Zinc sulfate **7779-88-6**, Zinc nitrate **16039-53-5**, Zinc lactate
(corrosion inhibitor; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)

RN 553-72-0 HCAPLUS

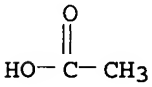
CN Benzoic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

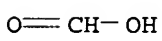
RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



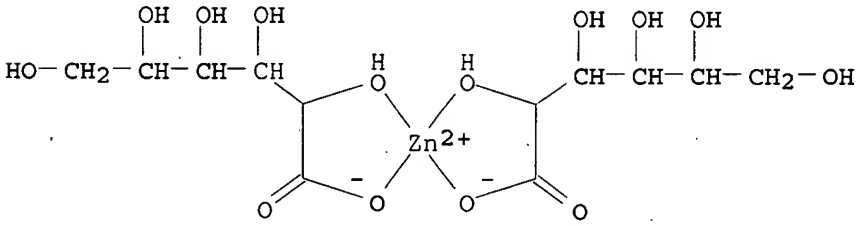
●1/2 Zn

RN 557-41-5 HCAPLUS
CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

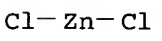


● 1/2 Zn

RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)

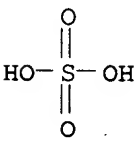


RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)



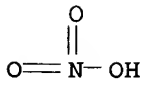
RN 7699-45-8 HCAPLUS
CN Zinc bromide (ZnBr2) (9CI) (CA INDEX NAME)

RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



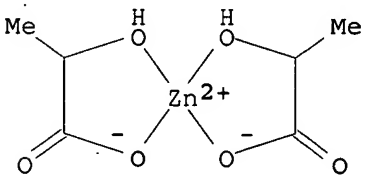
● Zn

RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

RN 16039-53-5 HCAPLUS
CN Zinc, bis[2-(hydroxy-κO)propanoato-κO]-, (T-4)- (9CI)
(CA INDEX NAME)



IC ICM C11D001-00
INCL 510220000
CC 46-6 (Surface Active Agents and **Detergents**)
ST automatic **dish washing** detergent corrosion inhibitor aluminum zinc ion
IT Surfactants
(anionic; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)
IT Surfactants
(cationic; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)
IT Detergents
(**dishwashing**; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)
IT Surfactants
(nonionic; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)
IT Corrosion inhibitors
(warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)
IT Alkali metal hydroxides
Bicarbonates
Carbonates, uses
(warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)
IT Surfactants
(zwitterionic; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)
IT 139-12-8, Aluminum acetate 546-46-3, Zinc citrate
553-72-0, Zinc benzoate **557-34-6**, Zinc acetate
557-41-5, Zinc formate 557-42-6, Zinc thiocyanate

688-37-9, Aluminum oleate 815-78-1, Aluminum tartrate 1302-42-7, Sodium aluminate **4468-02-4**, Zinc gluconate 7360-53-4, Aluminum formate 7446-70-0, Aluminum chloride, uses **7646-85-7**, Zinc chloride, uses **7699-45-8**, Zinc bromide 7727-15-3, Aluminum bromide **7733-02-0**, Zinc sulfate **7779-88-6**, Zinc nitrate 7783-49-5, Zinc fluoride 7784-23-8, Aluminum iodide 7784-30-7, Aluminum phosphate 10043-01-3, Aluminum sulfate 10139-47-6, Zinc iodide 10361-95-2, Zinc chlorate 11121-16-7, Aluminum borate 11126-81-1 13473-90-0, Aluminum nitrate 14018-95-2, Zinc dichromate 14519-07-4, Zinc bromate 15007-61-1, Aluminum potassium sulfate 15477-33-5, Aluminum chlorate **16039-53-5**, Zinc lactate 16283-36-6, Zinc salicylate 16871-71-9, Zinc fluorosilicate 18917-91-4, Aluminum lactate 22992-10-5, Aluminum zinc sulfate 37224-32-1, Sodium zincate
(corrosion inhibitor; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)

IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses
(warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)

IT 144-55-8, Sodium bicarbonate, uses 298-14-6, Potassium bicarbonate 497-19-8, Sodium carbonate, uses 533-96-0, Sodium sesquicarbonate 584-08-7, Potassium carbonate 101508-09-2, Potassium sesquicarbonate
(warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)

L72 ANSWER 5 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:893618 HCAPLUS
DOCUMENT NUMBER: 142:116524
TITLE: Detergent composition for kitchen
INVENTOR(S): Cha, Gyeong On; Lee, Jae Deok; Noh, Seung Ho
PATENT ASSIGNEE(S): Lg Chem Investment, Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2001063666	A	20010709	KR 1999-60867	1999 1223

PRIORITY APPLN. INFO.: KR 1999-60867 1999 1223

AB A detergent composition for kitchen is provided, which has effects to absorb deodorant and sterilize and wash kitchen utensils altogether. The detergent composition for kitchen comprises: (i) glyoxal 0.01-5%; (ii) one or more minerals 0.01-5% selected from magnesium chloride, magnesium sulfate, sodium carbonate, sodium

bicarbonate, sodium sulfate, sodium chloride and zinc chloride; (iii) one or more organic acids 0.5-20% selected from citric acid, malic acid, succinic acid, tartaric acid, sorbic acid, ascorbic acid, lactic acid, and gluconic acid; (iv) one or more mint oil 0.005-5% selected from eucalyptol, thymol, eugenol, Me salicylate, menthol, menthone, and herb mint; (v) one or more pH regulating agent selected from sodium carbonate, potassium hydroxide, tri-ethanolamine, diethanolamine, and monoethanolamine to make pH reach 4-5; and (vi) a viscosity regulating agent selected from solvents such as ethanol, isopropanol, isobutanol, propylene glycol, or ethylene glycol.

IT **7646-85-7**, Zinc chloride, uses
(deodorant **detergent composition** for kitchen)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D003-60

CC 46-6 (Surface Active Agents and **Detergents**)

IT 50-21-5, Lactic acid, uses 77-92-9, Citric acid, uses 87-69-4, Tartaric acid, uses 89-80-5, Menthone 89-83-8, Thymol 97-53-0, Eugenol 102-71-6, Triethanolamine, uses 110-15-6, Succinic acid, uses 110-44-1, Sorbic acid 111-42-2, Diethanolamine, uses 119-36-8, Methyl salicylate* 141-43-5, Ethanolamine, uses 144-55-8, Sodium bicarbonate, uses 470-82-6, Eucalyptol 497-19-8, Sodium carbonate, uses 526-95-4, D-Gluconic acid 1310-58-3, Potassium hydroxide, uses 1490-04-6, Menthol 6915-15-7, Malic acid 7487-88-9, Magnesium sulfate, uses **7646-85-7**, Zinc chloride, uses 7647-14-5, Sodium chloride, uses 7757-82-6, Sodium sulfate, uses 7786-30-3, Magnesium chloride, uses 62624-30-0, Ascorbic acid
(deodorant **detergent composition** for kitchen)

L72 ANSWER 6 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:857151 HCAPLUS

DOCUMENT NUMBER: 141:333985

TITLE: Antibacterial light duty liquid cleaning composition

INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert; Nascimbeni, Bruce

PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004204331	A1	20041014	US 2003-412831	2003 0414
WO 2004092319	A1	20041028	WO 2004-US11478	2004 0414

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-412831 A 2003 0414

AB A light duty liquid cleaning composition comprises approx. by weight: (a) 5% to 55% of at least two surfactants selected from the group consisting of alpha olefin sulfonate, paraffin sulfonate, linear alkyl benzene sulfonates, paraffin sulfonates, alkyl sulfate, ethoxylated alkyl ether sulfate, alkyl polyglucoside, amine oxide, ethoxylated nonionics, ethoxylated/propoxylated nonionics, C12-C14 alkyl monoalkanol amides and zwitterionic surfactants and mixts. thereof; (b) 0.25% to 6% of a zinc inorg. salt; (c) 0.25% to 6% of a sodium salt of lauroyl ethylene diamine triacetate; and (d) the balance being water.

IT **7646-85-7**, Zinc chloride, uses
(antibacterial light duty **liquid cleaning composition**)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D017-00

INCL 510424000

CC 46-6 (Surface Active Agents and **Detergents**)

IT **7646-85-7**, Zinc chloride, uses 206886-68-2, Sodium Lauroylethylenediaminetriacetate
(antibacterial light duty **liquid cleaning composition**)

L72 ANSWER 7 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:841699 HCAPLUS

DOCUMENT NUMBER: 141:316307

TITLE: Dimensionally stable packed portions of **detergents** or **cleaning compositions** with improved compounding as well as dissolving and cleaning power

INVENTOR(S): Jekel, Maren; Dueffels, Arno; Reimann, Matthias; Fileccia, Salvatore; Barthel, Wolfgang

PATENT ASSIGNEE(S): Henkel Kgaa, Germany

SOURCE: Ger. Offen., 64 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

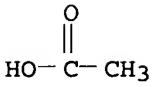
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10313456	A1	20041014	DE 2003-10313456	2003 0325
PRIORITY APPLN. INFO.:			DE 2003-10313456	2003 0325

AB A procedure for manufacture the title product comprises (i) a molding processing (thermoforming or injection molding) of the first covering material forming a container with at least one chamber, and (ii) filling-in of ≥1 substance (mixture/s), whereby at least one is a dispersion of solid particles (d. >1.1 g/cm3, especially >1.4 g/cm3) consisting of (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds. The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersed compds. contain ≥20 weight%, especially 50-60 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and 0.04-18 weight%, especially 0.2-14 weight% glass corrosion protective agents, silver protective agents and/or enzymes as well as 0.1-50 weight%, especially 0.6-31 weight%, of a sulfone group-containing (co)polymer. The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p. >30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging material (container and/or closure) having wall thickness <200 μm, especially <70 μm manufactured due to (i). Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D017-00
ICS C11D017-04
CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 38
ST **dishwashing** detergent dispersion polyethylene glycol dispersing agent; dimensionally stable water soluble water permeable detergent portion packaging; thermoforming injection molding water permeable detergent portion packaging; detergent nonionic polymer contg improved cleaning power; niotenside polyoxyalkylene **detergent compn**; glass corrosion protecting agent **dishwashing** detergent dispersion; silver protecting agent **dishwashing** detergent dispersion; manganese sulfate zinc acetate enzyme **dishwashing** detergent dispersion; sulfone group contg polymer **dishwashing** detergent dispersion
IT Polyoxyalkylenes, uses
(alkyl group-terminated, nonionic polymers, surfactants, niotenside; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Polyelectrolytes
(amphoteric; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Polyelectrolytes
(anionic; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Polyelectrolytes
(cationic; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT **Detergents**
(**cleaning compns.**; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Bleaching agents
Detergent builders
Disperse systems
Oxidation catalysts
Pigments, nonbiological
Surfactants
(dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Enzymes, uses
(dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Detergents
(**dishwashing**; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Molding of plastics and rubbers
(injection, watersol. or water dispersible packaging material; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Polyoxyalkylenes, uses
(nonionic polymers; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Surfactants
(nonionic; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Dispersing agents
(polyethylene glycol; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Sulfonic acids, uses
(polymers with acrylic acid; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Molding of plastics and rubbers
(thermoforming, watersol. or water dispersible packaging material; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Containers
(water soluble water permeable detergent portion packaging; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Packaging materials
(watersol. or water dispersible; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 10543-57-4, TAED
(bleaching activator; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 563-69-9, Carbonoperoxoic acid
(bleaching agent; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 497-19-8, Sodium carbonate, uses 1344-09-8, Sodium silicate
(builder; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 7758-29-4, Sodium tripolyphosphate
(builder; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 79-10-7D, Acrylic acid, polymers with sulfonic acids
(dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved

compounding as well as dissolving and cleaning power)
IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 106392-12-5, Ethylene oxide-propylene oxide block copolymer
(nonionic polymer component; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 7785-87-7, Manganese sulfate
(silver-protecting agent; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

L72 ANSWER 8 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:823994 HCAPLUS
DOCUMENT NUMBER: 141:316304
TITLE: Dimensionally stable packed **detergents** or **cleaning compositions** with improved compounding as well as dissolving and cleaning power
INVENTOR(S): Jekel, Maren; Dueffels, Arno; Reimann, Matthias; Barthel, Wolfgang; Fileccia, Salvatore
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, USA
SOURCE: PCT Int. Appl., 118 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085599	A1	20041007	WO 2004-EP2717	2004 0317

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2003-10312456 A 2003 0325

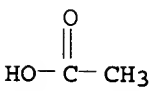
AB A procedure for manufacture the title product comprises (i) a molding processing (thermoforming or injection molding) of the first

covering material forming a container with at least one chamber, and (ii) filling-in of ≥1 substance (mixture/s), whereby at least one is a dispersion of solid particles (d. >1.1 g/cm3, especially >1.4 g/cm3) consisting of (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds. The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersed compds. contain ≥20 weight%, especially 50-60 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and 0.04-18 weight%, especially 0.2-14 weight% glass corrosion protective agents, silver protective agents and/or enzymes as well as 0.1-50 weight%, especially 0.6-31 weight%, of a sulfone group-containing (co)polymer. The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p. >30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging material (container and/or closure) having wall thickness <200 μm, especially <70 μm manufactured due to (i). Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D017-04
ICS C11D017-00; C11D011-00

CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 38

ST **dishwashing** detergent dispersion polyethylene glycol dispersing agent; dimensionally stable water soluble water permeable detergent portion packaging; detergent nonionic polymer

contg improved cleaning power; niotenside polyoxyalkylene **detergent compn**; glass corrosion protecting agent **dishwashing** detergent dispersion; silver protecting agent **dishwashing** detergent dispersion; manganese sulfate zinc acetate enzyme **dishwashing** detergent dispersion; sulfone group contg polymer **dishwashing** detergent dispersion

IT Polyoxyalkylenes; uses
(alkyl group-terminated, nonionic polymers, surfactants, niotenside; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Polyelectrolytes
(amphoteric; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Polyelectrolytes
(anionic; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Polyelectrolytes
(cationic; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT **Detergents**
(**cleaning compns.**; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Bleaching agents
Detergent builders
Disperse systems
Oxidation catalysts
Pigments, nonbiological
Surfactants
(dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Enzymes, uses
(dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Detergents
(**dishwashing**; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Molding of plastics and rubbers
(injection, watersol. or water dispersible packaging material; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Polyoxyalkylenes, uses
(nonionic polymers; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Surfactants
(nonionic; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

IT Dispersing agents

(polyethylene glycol; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Sulfonic acids, uses
(polymers with acrylic acid; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Molding of plastics and rubbers
(thermoforming, watersol. or water dispersible packaging material; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Containers
(water soluble water permeable detergent portion packaging; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT Packaging materials
(watersol. or water dispersible; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 10543-57-4, TAED
(bleaching activator; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 563-69-9, Carbonoperoxoic acid
(bleaching agent; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 497-19-8, Sodium carbonate, uses 1344-09-8, Sodium silicate
(builder; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 7758-29-4, Sodium tripolyphosphate
(builder; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 79-10-7D, Acrylic acid, polymers with sulfonic acids
(dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 106392-12-5, Ethylene oxide-propylene oxide block copolymer
(nonionic polymer component; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
IT 7785-87-7, Manganese sulfate
(silver-protecting agent; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 9 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:823993 HCAPLUS

DOCUMENT NUMBER: 141:316303
TITLE: Dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a density >1.040 g/cm3
INVENTOR(S): Lambotte, Alexander; Pegelow, Ulrich; Zippel, Johannes
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085597	A1	20041007	WO 2004-EP2721	2004 0317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10313457	A1	20041014	DE 2003-10313457	2003 0325

PRIORITY APPLN. INFO.: DE 2003-10313457 A 2003 0325

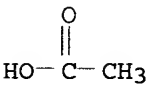
AB The title product, a dispersion of d. >1.040 g/cm3, especially >1.4 g/cm3 comprises (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds., which contain ≥20 weight%, especially ≥50 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and/or glass corrosion protective agents and/or silver protective agents referred to the total weight of (b). The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersion contains <10 weight%, especially <1 weight%, water referred to its total weight The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p.

>30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is coated with a watersol. or water dispersible packaging (wall thickness <200 μm, especially <70 μm) obtained by casting, thermoforming, or injection molding. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D017-00

CC 46-6 (Surface Active Agents and **Detergents**)

ST detergent nonionic polymer contg improved cleaning power; **dishwashing** detergent dispersion polyethylene glycol dispersing agent; niotenside polyoxyalkylene **detergent compn**; glass corrosion protecting additive **dishwashing** detergent dispersion; silver protecting additive **dishwashing** detergent dispersion

IT Polyoxyalkylenes, uses
(alkyl group-terminated, nonionic polymers, surfactants, niotenside; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Polyelectrolytes
(amphoteric; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Polyelectrolytes
(anionic; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Polyelectrolytes
(cationic; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT **Detergents**
(**cleaning compns.**; dispersion of a

detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Detergents
(**dishwashing**; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Bleaching agents
Detergent builders
Disperse systems
Oxidation catalysts
Pigments, nonbiological
Surfactants
(dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Enzymes, uses
(dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Polyoxyalkylenes, uses
(nonionic polymers; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Surfactants
(nonionic; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Dispersing agents
(polyethylene glycol; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Sulfonic acids, uses
(polymers with acrylic acid; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT Packaging materials
(watersol. or water dispersible; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT 10543-57-4, TAED
(bleaching activator; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT 563-69-9, Carbonoperoxoic acid
(bleaching agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT 497-19-8, Sodium carbonate, uses 1344-09-8, Sodium silicate
(builder; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT 7758-29-4, Sodium tripolyphosphate
(builder; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT 79-10-7D, Acrylic acid, polymers with sulfonic acids
(dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)
IT 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 106392-12-5, Ethylene oxide-propylene oxide block copolymer
(nonionic polymer component; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)
IT 7785-87-7, Manganese sulfate
(silver-protecting agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm3)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 10 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:823992 HCAPLUS
DOCUMENT NUMBER: 141:316302
TITLE: Detergents or cleaning agents with improved cleaning power containing glass corrosion protecting agents, silver protecting agents and/or enzymes
INVENTOR(S): Jekel, Maren; Pegelow, Ulrich; Kessler, Arnd
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085596	A1	20041007	WO 2004-EP2720	2004 0317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10313454	A1	20041021	DE 2003-10313454	2003 0325

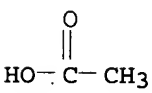
PRIORITY APPLN. INFO.: DE 2003-10313454 A 2003 0325

AB The title product (d. >1.1 g/cm3, esp >1.4 g/cm3) comprises a dispersion of (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds., which contain 0.02-20 weight%, especially 0.2-14 weight% (referred to the total weight of (b)), of ≥1 washing and cleaning active additive from glass corrosion protecting agents, silver protecting agents and/or enzymes and ≥20 weight%, especially ≥50 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers. The dispersing agent contains at least one nonionic polymer, especially polyethylene glycol and/or polypropylene glycol, whereby the total polyethylene glycol content of (a) amts. 10-90 weight%, especially 50-70 weight%. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside, (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersion contains <10 weight%, especially <1 weight%, water referred to its total weight The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p. >30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging (wall thickness <200 μm, especially <70 μm) obtained by casting, thermoforming, or injection molding. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; detergents or cleaning agents with improved cleaning power containing glass corrosion protecting agents, silver protecting agents and/or enzymes)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D017-00
ICS C11D003-37; C11D003-22; C11D003-386; C11D003-20; C11D003-16; C11D003-12

CC 46-6 (Surface Active Agents and **Detergents**)

ST detergent nonionic polymer contg improved cleaning power; **dishwashing** detergent dispersion polyethylene glycol dispersing agent; niotenside polyoxyalkylene **detergent**

compn; glass corrosion protective additive
dishwashing detergent; silver protective additive
dishwashing detergent; enzyme protective additive
dishwashing detergent; zinc acetate manganese sulfate in **dishwashing** detergent dispersion

IT **Detergents**
(**cleaning compns.**; **detergents** or **cleaning** agents with improved cleaning power containing glass corrosion protecting agents, silver protecting agents and/or enzymes)

IT Detergents
(**dishwashing**; detergents or cleaning agents with improved cleaning power containing glass corrosion protecting agents, silver protecting agents and/or enzymes)

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; detergents or cleaning agents with improved cleaning power containing glass corrosion protecting agents, silver protecting agents and/or enzymes)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 11 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:823990 HCAPLUS
DOCUMENT NUMBER: 141:316301
TITLE: Combined product of two detergents or cleaning agents of different solubility with improved compounding as well as dissolving and cleaning power
INVENTOR(S): Jekel, Maren; Pegelow, Ulrich; Lambotte, Alexander
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085593	A1	20041007	WO 2004-EP2722	2004 0317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10313458	A1	20041118	DE 2003-10313458	2003

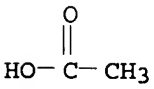
PRIORITY APPLN. INFO.: DE 2003-10313458 A 0325
2003
0325

AB The inventive **detergent** or **cleaning** **composition** comprises a first washing and **cleaning** active **composition** (dispersion) (A) consisting of (a) 10-90 weight% dispersing agents and (b) 10-90 weight% dispersed compds. (referred to the dispersion total weight), and a further (solid or **liquid**) washing and **cleaning** active **compn** . (B), which dissolves at 40° in water faster than A (>20 s, especially >120 s), whereby A dissolves <12 min, especially <7 min. The dispersing agent contains at least one nonionic polymer, especially ≥1 nonionic surfactant (≥30 %, especially ≥90% referred to to total **cleaning composition** weight). The dispersed compds. contain at least one detergent builder and/or bleaching agent and/or bleaching catalyst and/or washing- and cleaning-active polymer and/or glass corrosion protective agent and/or silver protective agent. They contain ≥30%, especially ≥90%, of all anionic and/or cationic and/or amphoteric polymers of the **cleaning composition** Preferably, A forms a void for an at least partially, sep. uptake of B. The title product is covered with a watersol. or water dispersible packaging (wall thickness <200 μm, especially <70 μm) obtained by casting, thermoforming, or injection molding, so that it may directly placed in the **dishwasher** interior or a dosing device. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; combined product of two detergents or cleaning agents of different solubility with improved compounding as well as dissolving and cleaning power)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D003-37
ICS C11D001-72

CC 46-6 (Surface Active Agents and **Detergents**)

ST combined **dishwashing compn** different water soly; detergent nonionic polymer contg improved cleaning power;

dishwashing detergent dispersion polyethylene glycol dispersing agent; niotenside contg **cleaning compn** improved silver protection

IT **Detergents**
(**cleaning compns.**; combined product of two detergents or cleaning agents of different solubility with improved compounding as well as dissolving and cleaning power)

IT Detergents
(**dishwashing**; combined product of two detergents or cleaning agents of different solubility with improved compounding as well as dissolving and cleaning power)

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; combined product of two detergents or cleaning agents of different solubility with improved compounding as well as dissolving and cleaning power)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 12 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:823989 HCAPLUS
DOCUMENT NUMBER: 141:316300
TITLE: Detergents or cleaning agents with improved compounding as well as dissolving and cleaning power containing anionic, cationic and/or amphoteric polymers
INVENTOR(S): Jekel, Maren; Pegelow, Ulrich; Lambotte, Alexander; Zipfel, Johannes
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Germany
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085592	A1	20041007	WO 2004-EP2716	2004 0317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10313455	A1	20041014	DE 2003-10313455	2003 0325

PRIORITY APPLN. INFO.: DE 2003-10313455 A 2003

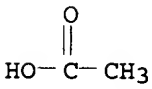
0325

AB A dispersion of the title product comprises (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds., which contain 0.1-50 weight%, especially 0.6-31 weight% (referred to the total weight of (b)), of an anionic, and/or cationic and/or amphoteric polymer. The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersed compds. contain ≥20 weight%, especially ≥50 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and/or glass corrosion protective agents and/or silver protective agents. The dispersion contains <10 weight%, especially <1 weight%, water referred to its total weight The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p. >30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging (wall thickness <200 μm, especially <70 μm) obtained by casting, thermoforming, or injection molding. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; detergents or cleaning agents with improved compounding as well as dissolving and cleaning power containing anionic, cationic and/or amphoteric polymers)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D003-37

CC 46-6 (Surface Active Agents and **Detergents**)

ST detergent nonionic polymer contg improved cleaning power; **dishwashing** detergent dispersion polyethylene glycol dispersing agent; niotenside polyoxyalkylene **detergent**

compn

IT **Detergents**
(**cleaning compns.**; **detergents** or **cleaning** agents with improved compounding as well as dissolving and cleaning power containing anionic, cationic and/or amphoteric polymers)

IT Detergents
(**dishwashing**; detergents or cleaning agents with improved compounding as well as dissolving and cleaning power containing anionic, cationic and/or amphoteric polymers)

IT **557-34-6**, Zinc acetate
(glass corrosion-protecting agent; detergents or cleaning agents with improved compounding as well as dissolving and cleaning power containing anionic, cationic and/or amphoteric polymers)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 13 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:823251 HCAPLUS
DOCUMENT NUMBER: 141:316297
TITLE: Deodorant **compositions** and **liquid detergents** containing them
INVENTOR(S): Konishi, Yoshihiro; Muraoka, Kaoru; Yoshida, Ryuji
PATENT ASSIGNEE(S): Kao Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

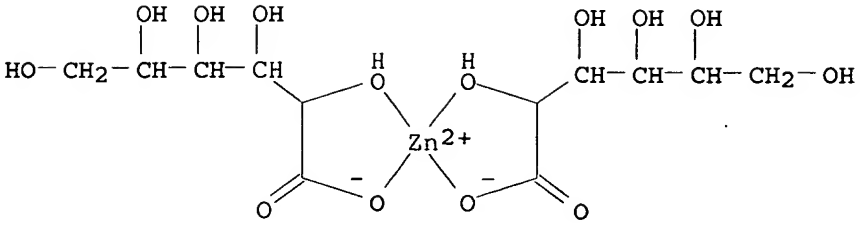
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004277554	A2	20041007	JP 2003-70572	2003 0314

PRIORITY APPLN. INFO.: JP 2003-70572 2003 0314

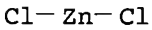
AB The **compns.**, useful for **dishwashing** detergents, contain 0.005-1% rosemary oils, lemongrass oils, spearmint oils, peppermint oils, sage oils, and/or ginger oils, 0.001-0.5% Zn, and water. Thus, a sponge soaked with an aqueous solution containing ZnCl2 0.06, rosemary oil 0.2, and lauryl glucoside 1.5% showed good deodorant properties.

IT **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate
(deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)

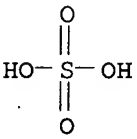
RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)



RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D003-50
ICS A61L002-18; C11B009-00; C11D003-04; C11D017-08
CC 46-6 (Surface Active Agents and **Detergents**)
ST deodorant rosemary oil **liq detergent** sponge; **dishwashing** detergent deodorant zinc lemongrass oil
IT Polyoxyalkylenes, uses
(alkyl group-terminated, sulfate Na salt, surfactant; deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT Deodorants
Surfactants
(deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT Polyoxyalkylenes, uses
(deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT **Detergents**
(**dishwashing, liquid**; deodorant **compns.** containing plant oils and Zn for **liquid dishwashing detergents**)
IT Essential oils
(ginger; deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT Essential oils
(lemongrass; deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT Essential oils
(peppermint; deodorant compns. containing plant oils and Zn for

liquid dishwashing detergents)
IT Essential oils
(rosemary; deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT Essential oils
(sage, Salvia officinalis; deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT Essential oils
(spearmint; deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate
(deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)
IT 1643-20-5, N-Lauryl-N,N-dimethylamine oxide 25322-68-3D, alkyl ether sulfate Na salt 27836-64-2, Lauryl glucoside
(surfactant; deodorant compns. containing plant oils and Zn for **liquid dishwashing detergents**)

L72 ANSWER 14 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:589642 HCAPLUS
DOCUMENT NUMBER: 141:142251
TITLE: Preparation of automatic **dishwashing compositions** utilizing in-situ prepared **water**-soluble zinc salts
INVENTOR(S): Song, Brian Xiaoqing
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004061070	A1	20040722	WO 2003-US40559	2003 1219
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004176269	A1	20040909	US 2003-738492	2003 1217
PRIORITY APPLN. INFO.:			US 2002-437077P P	2002 1230

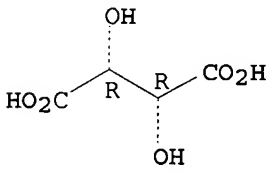
AB A process for preparing in-situ **water**-soluble zinc salts as a base or additive for an automatic **dishwashing composition** is composed of: (a) dispersing **ZnO** in **water**, (b) combining an acid, such as acetic acid and aspartic acid, with the **ZnO/water** mixture, (c) mixing the **ZnO/water** mixture and the acid until the **ZnO** is at least partially dissolved, (d) maintaining the **ZnO/water**/acid mixture within an acidic pH (<5), and (e) combining the **ZnO/water**/acid mixture with at least one rinse aid ingredient, such as a surfactant and a thickener, to form a rinse aid composition

IT **551-64-4P**, Tartaric acid zinc salt (1:1) **553-72-0P**, Zinc benzoate **557-34-6P**, Zinc acetate **557-41-5P**, Zinc formate **1332-07-6P**, Zinc borate **2452-01-9P**, Zinc laurate **2847-05-4P**, Zinc malate **4468-02-4P**, Zinc gluconate **7646-85-7P**, Zinc chloride, uses **7699-45-8P**, Zinc bromide **7733-02-0P**, Zinc sulfate **7779-88-6P**, Zinc nitrate **10380-06-0P**, Zinc perborate **13770-90-6P**, Zinc sulfamate **16039-53-5P**, Zinc lactate
(in-situ prepared **water**-soluble zinc salts for automatic **dishwashing compns.**)

RN 551-64-4 HCAPLUS

CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, zinc salt (1:1) (9CI) (CA INDEX NAME)

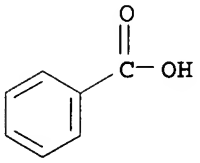
Absolute stereochemistry.



● Zn

RN 553-72-0 HCAPLUS

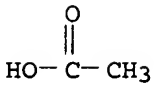
CN Benzoic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

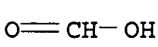
RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

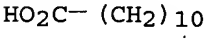
RN 557-41-5 HCAPLUS
CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

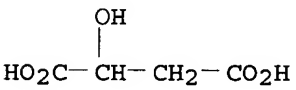
RN 1332-07-6 HCAPLUS
CN Boric acid, zinc salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 2452-01-9 HCAPLUS
CN Dodecanoic acid, zinc salt (9CI) (CA INDEX NAME)



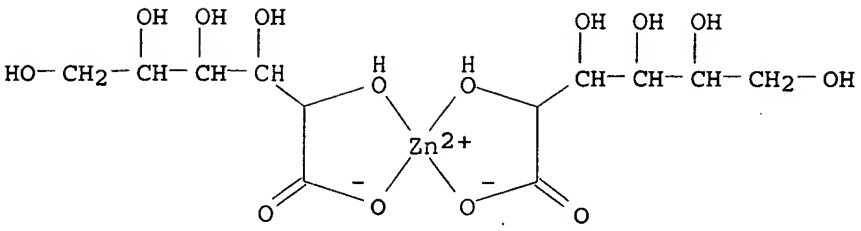
●1/2 Zn

RN 2847-05-4 HCAPLUS
CN Butanedioic acid, hydroxy-, zinc salt (1:1) (9CI) (CA INDEX NAME)

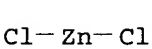


● Zn

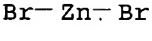
RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



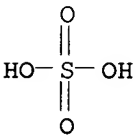
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)



RN 7699-45-8 HCAPLUS
CN Zinc bromide (ZnBr2) (9CI) (CA INDEX NAME)

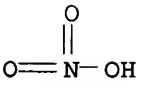


RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



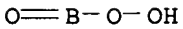
● Zn

RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



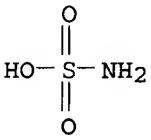
●1/2 Zn

RN 10380-06-0 HCAPLUS
CN Perboric acid (HBO(O2)), zinc salt (9CI) (CA INDEX NAME)



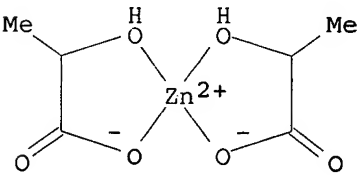
●1/2 Zn

RN 13770-90-6 HCAPLUS
CN Sulfamic acid, zinc salt (2:1) (8CI, 9CI) (CA INDEX NAME)



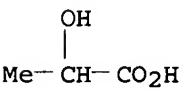
●1/2 Zn

RN 16039-53-5 HCAPLUS
CN Zinc, bis[2-(hydroxy-κO)propanoato-κO]-, (T-4)- (9CI)
(CA INDEX NAME)



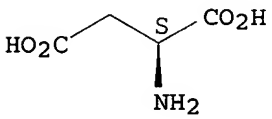
IT **50-21-5**, Lactic acid, reactions **56-84-8**, Aspartic acid, reactions **56-86-0**, Glutamic acid, reactions **64-18-6**, Formic acid, reactions **64-19-7**, Acetic acid, reactions **65-85-0**, Benzoic acid, reactions **87-69-4**, Tartaric acid, reactions **526-95-4**, Glyconic acid **1314-13-2**, **Zinc oxide**, reactions **5329-14-6**, Sulfamic acid **6915-15-7**, Malic acid **7647-01-0**, Hydrochloric acid, reactions **7664-93-9**, Sulfuric acid, reactions **7697-37-2**, Nitric acid, reactions **7789-31-3**, Bromic acid **10043-35-3**, Boric acid, reactions
(in-situ prepared **water**-soluble zinc salts for automatic **dishwashing compns.**)

RN 50-21-5 HCAPLUS
CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



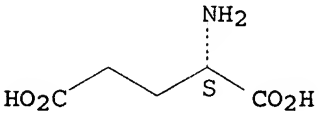
RN 56-84-8 HCAPLUS
CN L-Aspartic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

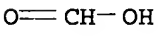


RN 56-86-0 HCAPLUS
CN L-Glutamic acid (9CI) (CA INDEX NAME)

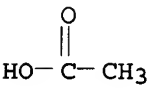
Absolute stereochemistry.



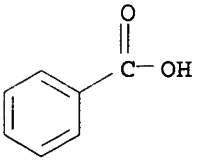
RN 64-18-6 HCAPLUS
CN Formic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64-19-7 HCAPLUS
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)

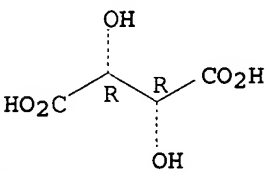


RN 65-85-0 HCAPLUS
CN Benzoic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



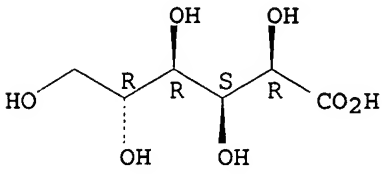
RN 87-69-4 HCAPLUS
CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

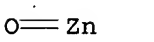


RN 526-95-4 HCAPLUS
CN D-Gluconic acid (9CI) (CA INDEX NAME)

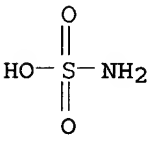
Absolute stereochemistry.



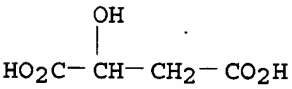
RN 1314-13-2 HCAPLUS
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



RN 5329-14-6 HCAPLUS
CN Sulfamic acid (8CI, 9CI) (CA INDEX NAME)

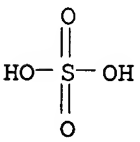


RN 6915-15-7 HCAPLUS
CN Butanedioic acid, hydroxy- (9CI) (CA INDEX NAME)



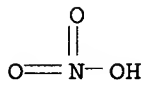
RN 7647-01-0 HCAPLUS
CN Hydrochloric acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

RN 7664-93-9 HCAPLUS
CN Sulfuric acid (8CI, 9CI) (CA INDEX NAME)

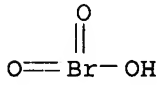


RN 7697-37-2 HCAPLUS

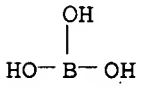
CN Nitric acid (8CI, 9CI) (CA INDEX NAME)



RN 7789-31-3 HCAPLUS
CN Bromic acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 10043-35-3 HCAPLUS
CN Boric acid (H3BO3) (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C11D003-02
ICS C11D003-20; C11D003-00; C01G009-00
CC 46-6 (Surface Active Agents and **Detergents**)
ST **dishwasher** detergent soluble zinc salt rinse aid prepn
IT Detergents
(**dishwashing**; in-situ prepared **water**-soluble zinc salts for automatic **dishwashing compns**.)
IT Detergents
(rinse aids; in-situ prepared **water**-soluble zinc salts for automatic **dishwashing compns.**)
IT **551-64-4P**, Tartaric acid zinc salt (1:1) **553-72-0P**, Zinc benzoate **557-34-6P**, Zinc acetate **557-41-5P**, Zinc formate **1332-07-6P**, Zinc borate **2452-01-9P**, Zinc laurate **2847-05-4P**, Zinc malate **4468-02-4P**, Zinc gluconate **7646-85-7P**, Zinc chloride, uses **7699-45-8P**, Zinc bromide **7733-02-0P**, Zinc sulfate **7779-88-6P**, Zinc nitrate **10380-06-0P**, Zinc perborate **13770-90-6P**, Zinc sulfamate **16039-53-5P**, Zinc lactate
(in-situ prepared **water**-soluble zinc salts for automatic **dishwashing compns.**)
IT **50-21-5**, Lactic acid, reactions **56-84-8**, Aspartic acid, reactions **56-86-0**, Glutamic acid, reactions **64-18-6**, Formic acid, reactions **64-19-7**, Acetic acid, reactions **65-85-0**, Benzoic acid, reactions **87-69-4**, Tartaric acid, reactions **526-95-4**, Glyconic acid **1314-13-2**, **Zinc oxide**, reactions **5329-14-6**, Sulfamic acid **6915-15-7**, Malic acid **7647-01-0**, Hydrochloric acid, reactions **7664-93-9**, Sulfuric acid, reactions **7697-37-2**, Nitric acid, reactions **7789-31-3**, Bromic acid **10043-35-3**, Boric acid, reactions
(in-situ prepared **water**-soluble zinc salts for automatic

dishwashing compns.)

L72 ANSWER 15 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:507835 HCAPLUS
DOCUMENT NUMBER: 141:39967
TITLE: Antibacterial **liquid detergents** with good low-temperature storage stability
INVENTOR(S): Konishi, Yoshihiro; Yomogida, Yoshihiro; Nishizawa, Nobuhiro
PATENT ASSIGNEE(S): Kao Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp. CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

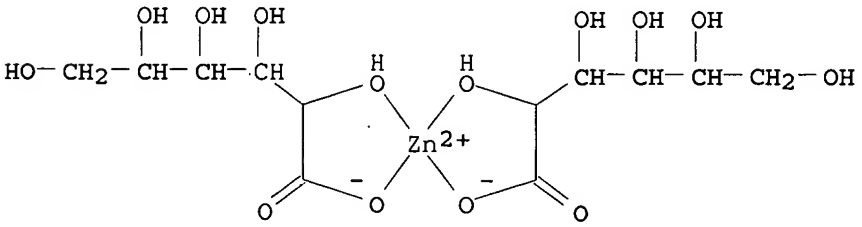
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004175846	A2	20040624	JP 2002-340761	2002 1125

PRIORITY APPLN. INFO.: JP 2002-340761 2002 1125

AB The detergents contain (a) 5-50% nonionic surfactants, (b) 0.001-0.1% Zn, and (c) compds. chosen from Na benzoate, p-hydroxybenzoate esters, and phenoxyethanol. Thus, a composition containing (a) 30% polyoxyethylene alkyl ether sulfate Na salt prepared from 50:50 1-decene and 1-dodecene as alc. components, (b) 0.15% Zn sulfate, (c) 0.5% phenoxyethanol, and other additives was used for **dishwashing**, resulting in good antibacterial property in a short time.

IT **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate
(antibacterial **liquid detergents** with good low-temperature storage stability)

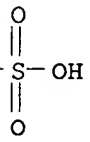
RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D010-02
ICS A01N025-02; A01N025-30; A01N031-14; A01N037-10; A01N037-40; A01N059-16; C11D001-29; C11D003-04; C11D003-20; C11D003-48; C11D009-50; C11D017-08
CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 5
ST antibacterial **liq detergent** **dishwashing** storage stability; sodium benzoate hydroxybenzoate ester zinc antibacterial detergent; nonionic surfactant polyoxyethylene alkyl sulfate sodium detergent; zinc sulfate phenoxyethanol **dishwashing** detergent antibacterial
IT Antibacterial agents
(antibacterial **liquid detergents** with good low-temperature storage stability)
IT **Detergents**
(**dishwashing**, **liquid**; antibacterial **liquid detergents** with good low-temperature storage stability)
IT Surfactants
(nonionic; antibacterial **liquid detergents** with good low-temperature storage stability)
IT 94-26-8, Butyl p-hydroxybenzoate 99-76-3, Methyl p-hydroxybenzoate 120-47-8, Ethyl p-hydroxybenzoate 122-99-6, Phenoxyethanol 532-32-1, Sodium benzoate 557-08-4, Zinc undecylenate **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate
(antibacterial **liquid detergents** with good low-temperature storage stability)
IT 75-21-8DP, Ethylene oxide, reaction products with hydroformylated 1-decene and 1-dodecene, sulfonated, sodium salt 112-41-4DP, 1-Dodecene, hydroformylated, reaction products with ethylene oxide and hydroformylated 1-decene, sulfonated, sodium salt 872-05-9DP, 1-Decene, hydroformylated, reaction products with ethylene oxide and hydroformylated 1-dodecene, sulfonated, sodium salt
(antibacterial **liquid detergents** with good low-temperature storage stability)

L72 ANSWER 16 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:351737 HCAPLUS

DOCUMENT NUMBER: 140:359369
TITLE: Antibacterial **liquid detergent composition** containing zinc
INVENTOR(S): Konishi, Yoshihiro; Nishida, Kohei
PATENT ASSIGNEE(S): Kao Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

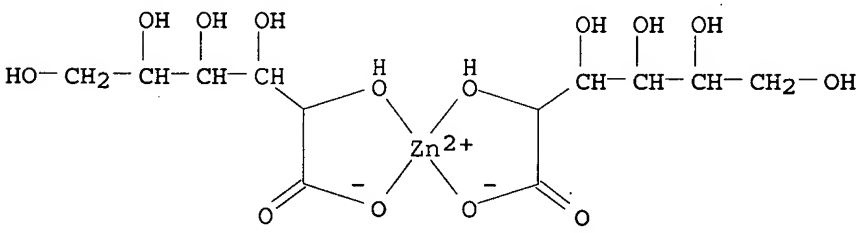
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004131626	A2	20040430	JP 2002-298530	2002 1011

PRIORITY APPLN. INFO.: JP 2002-298530 2002 1011

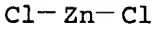
AB The **composition**, useful for **dishwashing**, contains (a) 5-50% of an anionic surfactant, (b) 0.01-5% of a polybasic carboxylic acid, i.e., C1-8 compound with 2-6 CO2H, (c) 0.001-0.5% Zn, (d) 0.02-2% of an alkaline earth metal, and water at d/b (mol) ≥1 and d/c (mol) ≥1. Thus, a composition containing 15% Na polyoxyethylene alkyl ether sulfate, 0.5% citric acid, 0.15% ZnSO4, and 4.5% MgCl2.6H2O showed good antibacterial effect associated with prevention of precipitation in storage.

IT **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate
(**liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)

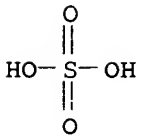
RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)



RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D003-20
ICS A01N059-06; A01N059-16; C11D001-75; C11D003-04; C11D003-48; C11D017-08
CC 46-6 (Surface Active Agents and **Detergents**)
ST **liq detergent** zinc antibacterial effect; anionic surfactant zinc sulfate **liq detergent**; polybasic carboxlyic acid zinc sulfate detergent; alk earth metal zinc **liq detergent**; storage stability **liq detergent** zinc sulfate
IT Polyoxyalkylenes, uses
(alkyl ether, sodium sulfate, anionic surfactant; **liq . detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT Surfactants
(anionic; **liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT **Detergents**
(**dishwashing**; **liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT Alkaline earth metals
(in **liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT Antibacterial agents
(**liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT **Detergents**
(**liquid**; **liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT 25322-68-3D, Polyethylene glycol, alkyl ether, sodium sulfate
(anionic surfactant; **liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT 77-92-9, Citric acid, uses 7786-30-3, Magnesium chloride, uses
(in **liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT 1643-20-5, N-Lauryl-N,N-dimethylamine oxide 7732-18-5, Water, uses 61792-31-2, Laurylamidopropyldimethylamine oxide
(in **liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)
IT **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate
(**liquid detergent composition** containing zinc with good antibactericidal effect and storage stability)

L72 ANSWER 17 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:931461 HCAPLUS
DOCUMENT NUMBER: 139:383096
TITLE: Light-duty liquid disinfectant detergent containing lactic acid and zinc chloride
INVENTOR(S): Arvanitidou, Evangelia
PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA
SOURCE: PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003097779	A1	20031127	WO 2003-US14689	2003 0512

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-144084 A 2002 0513

AB A title detergent comprises a paraffin sulfonate, an α-olefin sulfonate, an acid, a sultaine surfactant, an inorg. Zn salt, and H2O. A title detergent having pH 3.5 contained paraffin sulfonate 11.01, α-olefin sulfonate 22.03, cocoamidopropyl hydroxysultaine alkali metal salt 6.96, lactic acid 2.00, ZnCl2 1.00 and H2O 56.00.

IT **7646-85-7**, Zinc chloride, uses
(light-duty **liquid detergent** containing lactic acid and)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D003-02
ICS C11D003-20; C11D001-94
CC 46-6 (Surface Active Agents and **Detergents**)
IT **7646-85-7**, Zinc chloride, uses
(light-duty **liquid detergent** containing lactic acid and)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 18 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:707829 HCAPLUS
DOCUMENT NUMBER: 139:216208
TITLE: Antibacterial light duty liquid detergent with high foaming and good grease cutting properties
INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert; Nascimbeni, Bruce
PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6617296	B1	20030909	US 2003-378878	2003 0305

PRIORITY APPLN. INFO.: US 2003-378878 2003 0305

AB A light duty liquid comprises of at least two different surfactants, lauroyl ethylenediaminetriacetate (i.e, sodium lauroylethylenediaminetriacetate), a zinc inorg. salt (i.e., zinc chloride), and water.
IT **7646-85-7**, Zinc chloride, uses
(antibacterial light duty **liquid detergent**)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D017-00
INCL 510221000; 510235000; 510424000; 510426000; 510433000; 510470000; 510490000; 510499000; 510508000
CC 46-6 (Surface Active Agents and **Detergents**)
IT **7646-85-7**, Zinc chloride, uses
(antibacterial light duty **liquid detergent**)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 19 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:532736 HCAPLUS
DOCUMENT NUMBER: 139:102763
TITLE: Composition, process and uses of salt coated granules
INVENTOR(S): Bach, Poul; Simonsen, Ole
PATENT ASSIGNEE(S): Novozymes A/S, Den.
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

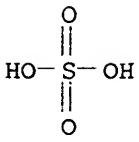
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003055967	A1	20030710	WO 2002-DK885	2002 1220
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1456336	A1	20040915	EP 2002-787464	2002 1220
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005085406	A1	20050421	US 2003-499497	2002 1220
PRIORITY APPLN. INFO.:			DK 2001-1930 A	2001 1221
			WO 2002-DK885 W	2002 1220

AB A process for preparing coated granules comprises the steps of: (a) providing a core unit comprising an active component (b) contacting the core unit with a liquid dispersion comprising a solvent, a dissolved salt and solid dispersed particles wherein the solid particles constitute at least 10% weight/weight of the total dry matter of the dispersion (c) evaporating the solvent of the liquid dispersion to leave salt and solid particles coated onto the core unit.

IT **7733-02-0**, Zinc sulfate
(composition, process and uses of salt coated granules)

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D003-386
ICS C11D011-00; C11D017-00; C12N009-98
CC 46-5 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 17
IT **Detergents**
(**dishwashing**, granular; **composition**, process and uses of salt coated granules)
IT **Detergents**
(enzyme-containing; **composition**, process and uses of salt coated granules)
IT **Detergents**
(powdered; **composition**, process and uses of salt coated granules)
IT 57-50-1, Sucrose, uses 68-04-2, Sodium citrate 142-72-3, Magnesium acetate 1330-43-4, Sodium borate 6132-04-3, Sodium citrate dihydrate 7446-20-0, Zincsulfate heptahydrate 7487-88-9, Magnesium sulfate, uses 7558-79-4 7558-80-7, Sodium dihydrogen phosphate 7601-54-9, Sodium phosphate 7646-93-7, Potassium hydrogen sulfate 7722-76-1, Ammonium dihydrogen phosphate **7733-02-0**, Zinc sulfate 7757-82-6, Sodium sulphate, uses 7758-11-4 7758-29-4, Sodium tripolyphosphate 7758-98-7, Copper sulfate, uses 7758-99-8, Copper sulfate pentahydrate 7778-77-0, Potassium dihydrogen phosphate 7778-80-5, Potassium sulfate, uses 7783-20-2, Ammonium sulfate, uses 10034-99-8, Magnesium sulfate heptahydrate 10377-60-3, Magnesium nitrate 11130-11-3 13446-18-9, Magnesium nitrate hexahydrate 14807-96-6, Talc, uses 16674-78-5, Magnesium acetate tetrahydrate 556816-16-1
(composition, process and uses of salt coated granules)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 20 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:28885 HCAPLUS
DOCUMENT NUMBER: 138:41026
TITLE: Nano-class composite detergent and its preparing process
INVENTOR(S): Liang, Guangchuan; Liu, Qiwen; Li, Wei; Jia, Di; Liang, Jinsheng
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

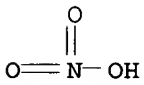
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1325950	A	20011212	CN 2001-120229	2001 0710
PRIORITY APPLN. INFO.:			CN 2001-120229	2001 0710

AB The composite detergent is composed of surfactant 10-40, natural inorg. non-metal mineral (clay-type natural mineral containing Al or Mg and having nanosized lamellar or channel structure) 1-40, nanometer particle antibacterial agent (such as CeO2, thiazole, ZnO) 0.1-25, alkali active agent (such as Na2CO3, Na2SiO3) 5-40, Ca-Mg ion chelating agent (such as 4A zeolite, SKS-6) 5-60, bleaching agent 1-5, dirt suspending agent 0-20, anti-clustering agent (such as Na xylenesulfonate) 1-5, fluorescent brightening agent 0.1-1, filler (such as Na2SO4) 0- 30 and perfume 0-0.1 weight%. The preparing process comprises treating natural inorg. non-metal mineral with nanometer composite technique, mixing it with other components, activating at 20-150°, and then drying, spray drying or agglomerating to obtain the composite detergent.

IT **7779-88-6**, Zinc nitrate
(nano-class **composite detergent composition**)

RN 7779-88-6 HCAPLUS

CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D003-00

CC 46-5 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 57

IT 151-21-3, Sodium dodecyl sulfate, uses 288-47-1, Thiazole 1300-72-7, Sodium xylenesulfonate 1312-81-8, Lanthanum oxide 1314-13-2, Zinc oxide, uses 6834-92-0, Sodium metasilicate **7779-88-6**, Zinc nitrate 7783-90-6, Silver chloride, uses 9002-92-0, Polyethylene glycol dodecyl ether 9014-92-0, Polyethylene glycol dodecylphenyl ether 11129-18-3, Cerium oxide 13463-67-7, Titania, uses 20526-58-3 25155-30-0, Sodium dodecyl benzenesulfonate
(nano-class **composite detergent composition**)

L72 ANSWER 21 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:960648 HCAPLUS

DOCUMENT NUMBER: 138:26144

TITLE: Antibacterial light duty liquid cleaning composition comprising zinc salt

INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert;

Nascimbeni, Bruce
PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA
SOURCE: U.S., 5 pp., Cont.-in-part of U.S. 6,492,313.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6495500	B1	20021217	US 2002-195879	2002 0715
US 6492313	B1	20021210	US 2002-192935	2002 0711

PRIORITY APPLN. INFO.: US 2002-192935 A2 2002 0711

AB A light duty liquid cleaning composition comprises a C8-C18 ethoxylated alkyl ether sulfate surfactant, a magnesium salt of a C8-C18 linear alkyl benzene sulfonate, a sodium salt of a C8-C18 linear alkyl benzene sulfonate, an amine oxide, a polyalkylglucoside, a zinc inorg. salt, and water. Thus, a liquid cleaning composition was prepared by mixing ammonium alkyl ether sulfate 1.3EO 11.49, magnesium linear alkyl sulfonate 9.02, sodium linear alkyl sulfonate 3.00, alkyl polyglycoside 10.00, C12-C14 amidopropylamine oxide 5.42, sodium xylene sulfonate 1.50, sodium lauroyl ethylene diamine triacetate 1.50, zinc chloride 1.00 part, other additives and water.

IT **7646-85-7**, Zinc chloride, uses
(preparation of antibacterial light duty **liquid cleaning composition** containing zinc salt)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D017-00
INCL 510221000; 510235000; 510424000; 510425000; 510433000; 510470000; 510490000; 510499000; 510508000
CC 46-6 (Surface Active Agents and **Detergents**)
IT **7646-85-7**, Zinc chloride, uses
(preparation of antibacterial light duty **liquid cleaning composition** containing zinc salt)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 22 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:942777 HCAPLUS
DOCUMENT NUMBER: 138:5894
TITLE: Antibacterial light duty liquid detergent containing zinc salt
INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert;

Nascimbeni, Bruce
PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6492313	B1	20021210	US 2002-192935	20020711
US 6495500	B1	20021217	US 2002-195879	20020715

PRIORITY APPLN. INFO.: US 2002-192935 A2 20020711

AB A light duty, liquid cleaning composition comprises a paraffin sulfonate, an alpha olefin sulfonate, an amine oxide, lauryol ethylenediaminetriacetate, a zinc inorg. salt, and water. The composition has good grease-cutting and excellent disinfecting properties on hard surfaces.
IT **7646-85-7**, Zinc chloride, uses
(light-duty antibacterial **cleaning composition** containing paraffin sulfonate and zinc salt)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D017-00
INCL 510221000; 510235000; 510425000; 510424000; 510433000; 510470000; 510490000; 510499000; 510508000
CC 46-6 (Surface Active Agents and **Detergents**)
IT **7646-85-7**, Zinc chloride, uses
(light-duty antibacterial **cleaning composition** containing paraffin sulfonate and zinc salt)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 23 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:688554 HCAPLUS
DOCUMENT NUMBER: 137:203064
TITLE: **Liquid** automatic **dishwashing composition** containing zinc gluconate with improved glassware protection
INVENTOR(S): Keyes, George B.; Seaman, Charles E.; Kasson, Jon K.
PATENT ASSIGNEE(S): Johnsondiversey, Inc., USA
SOURCE: U.S., 9 pp., Cont.-in-part of U.S. 6,083,894.
CODEN: USXXAM
DOCUMENT TYPE: Patent

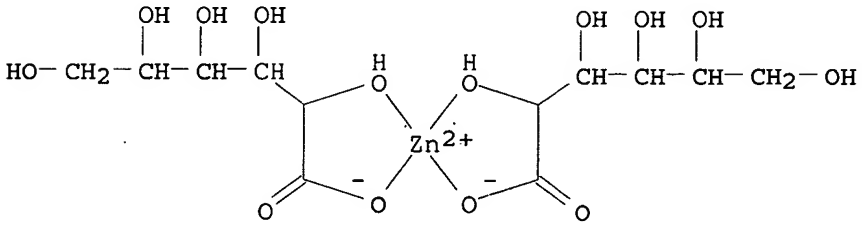
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6448210	B1	20020910	US 2000-504360	2000 0215
US 6083894	A	20000704	US 1999-272133	1999 0319
WO 2000056851	A1	20000928	WO 2000-US6129	2000 0309
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
GB 2364324	A1	20020123	GB 2001-24033	2000 0309
GB 2364324	B2	20040121		
ES 2192976	A1	20031016	ES 2001-50071	2000 0309
ES 2192976	B2	20040801		

PRIORITY APPLN. INFO.:	US 1999-272133	A2	1999 0319
	US 2000-504360	A	2000 0215
	WO 2000-US6129	W	2000 0309

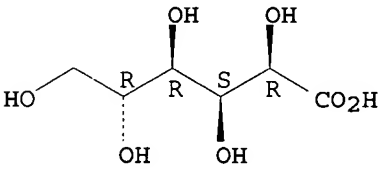
AB Title **liquid** automatic **dishwashing** **detergent composition** comprises (a) a chelate, (b) a base selected from the group consisting of sodium hydroxide, potassium hydroxide, or a mixture thereof, and (c) at least 3% of zinc gluconate; wherein the zinc gluconate is formed in an in situ process step. An example **dishwashing detergent** was **formulated** by admixing gluconic acid 2.58, **zinc oxide** powder 0.54, trisodium nitrilotriacetate (NTA, 40%) 68.50, Dequest 2010 1.50, KOH, (flake, 90%) 5.00, NaOH (anhydrous) 4.00 wt% in deionized **water** 17.88 wt%. The detergent demonstrated improved glassware protection when employed in conjunction with cleaning materials having high concns. of alkaline materials.

IT **4468-02-4**, Zinc gluconate
(formulation of **liquid** automatic **dishwashing composition** for **cleaning** alkali materials)
RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)

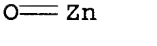


IT **526-95-4**, Gluconic acid **1314-13-2**, **Zinc oxide**, reactions
(source of zinc gluconate; formulation of **liquid** automatic **dishwashing composition** containing zinc gluconate)
RN 526-95-4 HCAPLUS
CN D-Gluconic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1314-13-2 HCAPLUS
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



IC ICM C11D007-06
ICS C11D007-10
INCL 510221000
CC 46-6 (Surface Active Agents and **Detergents**)
ST **liq** automatic **dishwashing detergent** glassware zinc gluconate
IT **Detergents**
(**dishwashing, liquid; formulation** of **liquid** automatic **dishwashing compn** . for **cleaning** alkali materials)
IT Chelating agents
(formulation of **liquid** automatic **dishwashing composition** for **cleaning** alkali materials)
IT Glass, miscellaneous
(glassware; formulation of **liquid** automatic **dishwashing composition** for **cleaning** alkali materials)

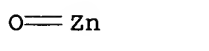
IT 5064-31-3, Trisodium nitrilotriacetate
(chelating agent; formulation of **liquid** automatic **dishwashing composition** for **cleaning** alkali materials)
IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 2809-21-4, Dequest 2010 **4468-02-4**, Zinc gluconate
(formulation of **liquid** automatic **dishwashing composition** for **cleaning** alkali materials)
IT **526-95-4**, Gluconic acid 527-07-1, Sodium gluconate **1314-13-2**, **Zinc oxide**, reactions 16788-42-4, Zinc sulfate hydrate
(source of zinc gluconate; formulation of **liquid** automatic **dishwashing composition** containing zinc gluconate)
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 24 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:475242 HCAPLUS
DOCUMENT NUMBER: 137:34834
TITLE: Method and apparatus for recycling of polluted **cleaning solutions**
INVENTOR(S): Okamoto, Yoshihiro; Nakamura, Kazuya; Arai, Hitoshi; Sawairi, Kiyoshi
PATENT ASSIGNEE(S): Sawer Corporation K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

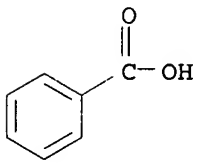
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002177964	A2	20020625	JP 2000-404050	2000 1207
PRIORITY APPLN. INFO.:			JP 2000-404050	2000 1207

AB The **solns.** recovered after **cleaning** metal masks, mesh screens, etc., are recycled by the following steps: adding adsorbents of carbonate salts, chlorides, fermentation liquid, oxides, and/or surfactants to the recovered solns.; stirring and leaving the mixts.; sedimentation-separating suspended matter; recovering and storing the resulting supernatants; and using the stored **solns.** for **cleaning.** The apparatus has a recycling function for the polluted **solns.** and a **cleaning** function for materials to be cleaned. Thus, C-containing cleaning wastewater was stirred with CaCO3 and sedimentation-separated for 30 min to give a transparent supernatant.
IT **1314-13-2**, **Zinc oxide**, uses
(adsorbent; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
RN 1314-13-2 HCAPLUS

CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



IT **65-85-0D**, Benzoic acid, esters
(adsorbents; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
RN 65-85-0 HCAPLUS
CN Benzoic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C02F001-52
ICS B01D021-01; C02F001-28; C11D007-12; C11D007-20; C11D007-26; C11D007-40; C11D007-50; C11D007-60
CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 60
ST **cleaning soln** recycling adsorbent mixing sedimentation supernatant; wastewater **cleaning** recycling adsorbent **mixing** sedimentation; calcium carbonate suspended matter sedimentation **cleaning soln**
IT Sake
(adsorbent; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
IT Kaolin, uses
(adsorbent; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
IT Lecithins
Monoglycerides
(adsorbents; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
IT Wastewater treatment
(adsorption; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
IT Fermentation
(liquid from, adsorbents; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
IT Cleaning solvents
Recycling
(method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)
IT Wastewater treatment
(settling; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)

IT 99-96-7, uses 471-34-1, Calcium carbonate, uses 1305-78-8, Calcium oxide, uses 1309-37-1, Iron(III) oxide, uses 1309-48-4, Magnesium oxide, uses **1314-13-2**, **Zinc oxide**, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7786-30-3, Magnesium chloride, uses
(adsorbent; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)

IT **65-85-0D**, Benzoic acid, esters
(adsorbents; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)

L72 ANSWER 25 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:578597 HCAPLUS
DOCUMENT NUMBER: 135:124156
TITLE: Bactericide combinations in detergents
INVENTOR(S): Elsmore, Richard; Houghton, Mark Phillip
PATENT ASSIGNEE(S): Robert McBride Ltd., UK
SOURCE: Brit. UK Pat. Appl., 53 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

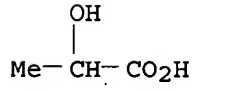
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	1999 1001

PRIORITY APPLN. INFO.: GB 1999-23253 1999 1001

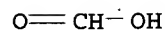
AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing reduction activity after contact 2.

IT **50-21-5**, uses **64-18-6**, Formic acid, uses **64-18-6D**, Formic acid, reaction products **64-19-7D**, Acetic acid, derivs., uses **1314-13-2**, **Zinc oxide (ZnO)**, uses **5329-14-6**, Sulfamic acid **6915-15-7** **7647-01-0**, Hydrochloric acid, uses **7664-93-9**, Sulfuric acid, uses **7697-37-2**, Nitric acid, uses **10043-35-3**, Boric acid (H3BO3), uses
(bactericide combinations in detergents)

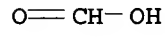
RN 50-21-5 HCAPLUS
CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



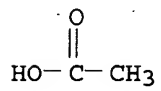
RN 64-18-6 HCAPLUS
CN Formic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



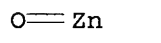
RN 64-18-6 HCAPLUS
CN Formic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



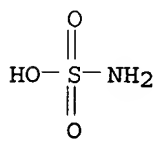
RN 64-19-7 HCAPLUS
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



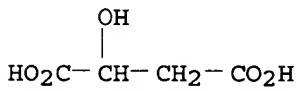
RN 1314-13-2 HCAPLUS
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



RN 5329-14-6 HCAPLUS
CN Sulfamic acid (8CI, 9CI) (CA INDEX NAME)

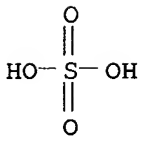


RN 6915-15-7 HCAPLUS
CN Butanedioic acid, hydroxy- (9CI) (CA INDEX NAME)

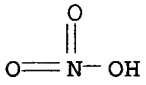


RN 7647-01-0 HCAPLUS
CN Hydrochloric acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

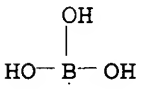
RN 7664-93-9 HCAPLUS
CN Sulfuric acid (8CI, 9CI) (CA INDEX NAME)



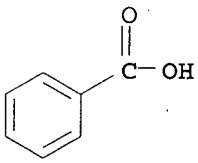
RN 7697-37-2 HCAPLUS
CN Nitric acid (8CI, 9CI) (CA INDEX NAME)



RN 10043-35-3 HCAPLUS
CN Boric acid (H3BO3) (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **65-85-0**, Benzoic acid, uses
(r; bactericide combinations in detergents)
RN 65-85-0 HCAPLUS
CN Benzoic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C11D003-48
CC 46-6 (Surface Active Agents and **Detergents**)
IT **Detergents**
(**liquid**; bactericide combinations in detergents)
IT 50-00-0, Formaldehyde, uses 50-00-0D, Formaldehyde, reaction products, uses 50-14-6 **50-21-5**, uses 50-65-7 50-99-7, D-Glucose, uses 51-03-6 51-28-5, uses 52-51-7 52-68-6 54-21-7 54-64-8 55-38-9 55-56-1 55-86-7 56-35-9 56-36-0 56-37-1 56-38-2 56-95-1 57-09-0 57-10-3, Hexadecanoic acid, uses 57-15-8 57-24-9, Strychnidin-10-one 57-55-6D, Propylene glycol, reaction products with formaldehyde 58-36-6 58-89-9 59-50-7 59-87-0 60-12-8, Benzeneethanol 60-51-5 61-73-4 62-38-4 62-56-6, Thiourea, uses 62-73-7 63-25-2 **64-18-6**, Formic acid, uses **64-18-6D**, Formic acid, reaction products **64-19-7D**, Acetic acid, derivs., uses 64-69-7 67-20-9 67-63-0D, 2-Propanol, reaction products with boron trifluoride and 5-ethylidenebicyclo[2.2.1]hept-2-ene, uses 67-66-3, uses 67-68-5, uses 67-97-0 69-72-7, uses 70-55-3 71-23-8,

1-Propanol, uses 71-41-0, 1-Pentanol, uses 72-43-5 72-56-0
74-83-9, uses 75-12-7D, Formamide, reaction products with
formaldehyde, uses 75-21-8, Oxirane, uses 75-31-0,
2-Propanamine, uses 75-91-2 76-06-2 76-22-2 76-39-1
76-87-9 77-42-9 77-48-5 77-49-6 77-78-1D, Dimethyl
sulfate, quaternized with 9-octadecenoic acid/triethanolamine
reaction products 77-78-1D, Dimethyl sulfate, quaternized with
fatty acid/triethanolamine reaction products 77-92-9, uses
78-59-1 78-69-3 78-70-6 78-79-5D, Isoprene, reaction
products with acetic acid 78-83-1, uses 78-92-2, 2-Butanol
79-07-2 79-08-3 79-11-8, uses 79-11-8D, Chloroacetic acid,
reaction products with N-C10-16-alkyltrimethylenediamines
79-11-8D, Acetic acid, chloro-, reaction products with
diethylenetriamine N-mono- and di-C8-18-alkyl derivs., uses
79-14-1, uses 79-20-9 79-21-0, Ethaneperoxoic acid 79-69-6
79-92-5D, 2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane, reaction
products with 2-methoxyphenol, hydrogenated 80-26-2 80-27-3
80-46-6 80-71-7 81-07-2D, 1,2-Benzisothiazol-3(2H)-one
1,1-dioxide, salts with quaternary ammonium compds.,
benzyl-C12-18-alkyldimethyl (1:1) 81-14-1 81-15-2 81-81-2
81-82-3 82-66-6 83-34-1 83-79-4 84-65-1,
9,10-Anthracenedione 84-66-2 84-74-2 85-91-6 87-10-5
87-17-2 87-20-7 87-22-9 87-90-1 88-04-0 88-06-2
88-14-2, 2-Furancarboxylic acid 88-84-6 89-68-9 89-78-1
89-79-2 89-83-8 90-05-1D, Phenol, 2-methoxy-, reaction
products with 2,2-dimethyl-3-methylenebicyclo[2.2.1]heptane,
hydrogenated 90-13-1 90-17-5 90-43-7, [1,1'-Biphenyl]-2-ol
90-43-7D, [1,1'-Biphenyl]-2-ol, chlorinated 90-87-9 91-20-3,
Naphthalene, uses 91-61-2 91-64-5, 2H-1-Benzopyran-2-one
93-15-2 93-16-3 93-51-6 93-59-4, Benzenecarboperoxoic acid
93-65-2 93-69-6 93-89-0 94-13-3 94-18-8 94-26-8
94-36-0, uses 94-96-2 95-14-7, 1H-Benzotriazole 95-41-0
95-48-7, uses 96-24-2 96-29-7 97-23-4 97-24-5 97-54-1
97-77-8 98-01-1, 2-Furancarboxaldehyde, uses 98-11-3D,
Benzenesulfonic acid, mono-C10-14-alkyl derivs., compds. with Me
1H-benzimidazol-2-ylcarbamate, uses 98-53-3 98-55-5 99-49-0
99-76-3 99-86-5 100-37-8 100-44-7, uses 100-51-6,
Benzenemethanol, uses 100-52-7, Benzaldehyde, uses 100-73-2
100-86-7 100-89-0 100-97-0, uses 101-20-2 101-21-3
101-39-3 101-53-1 101-84-8 101-85-9 102-17-0 102-20-5
102-30-7 102-71-6D, copper complexes 102-71-6D,
Triethanolamine, reaction products with 9-octadecenoic acid, di-Me
sulfate-quaternized 102-98-7 103-05-9 103-26-4 103-52-6
103-82-2, Benzeneacetic acid, uses 103-95-7 104-09-6
104-21-2 104-29-0 104-53-0, Benzenepropanal 104-54-1
104-55-2 104-60-9 104-61-0 104-62-1 104-67-6 104-76-7
104-78-9 104-87-0 105-01-1 105-66-8 105-85-1 105-87-3
105-90-8 106-22-9 106-24-1 106-25-2 106-30-9 106-44-5,
uses 106-46-7 106-70-7 106-72-9 106-73-0 106-79-6
106-88-7 106-89-8, uses 107-02-8, 2-Propenal, uses
107-21-1D, Ethylene glycol, reaction products with formaldehyde
107-22-2, Ethanedial 107-41-5 107-43-7 107-75-5 107-95-9D,
β-Alanine, N-coco alkyl derivs. 108-16-7 108-39-4, uses
108-64-5 108-80-5, 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione
108-88-3, uses 108-89-4 108-94-1, Cyclohexanone, uses
108-95-2, Phenol, uses 108-95-2D, Phenol, polypropene derivs.,
uses 108-99-6 109-21-7 109-89-7, uses 110-05-4 110-15-6,
Butanedioic acid, uses 110-27-0 110-38-3 110-41-8 110-44-1
110-58-7, 1-Pentanamine 110-62-3, Pentanal 110-75-8
110-86-1, Pyridine, uses 110-89-4, Piperidine, uses 111-11-5

111-27-3, 1-Hexanol, uses 111-30-8, Pentanedial 111-40-0D, 1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with 1-chlorooctane 111-40-0D, Diethylenetriamine, reaction products with chloroacetic acid, N-mono- and di-C8-18-alkyl derivs. 111-41-1D, 2-(2-Aminoethyl)aminoethanol, reaction with coco fatty acids, quaternized 111-42-2, uses
(bactericide combinations in detergents)

IT 1120-24-7 1120-48-5 1121-30-8 1121-31-9 1123-85-9
1135-66-6 1192-52-5 1205-17-0 1209-61-6 1222-05-5
1300-71-6 1303-28-2, Arsenic oxide (As2O5) 1303-86-2, Boron oxide (B2O3), uses 1303-96-4D, Borax (B4Na2O7.10H2O), reaction products with sulfuric acid 1305-78-8, Calcium oxide, uses 1309-48-4, Magnesium oxide (MgO), uses 1310-58-3, Potassium hydroxide (K(OH)), uses 1310-73-2, Sodium hydroxide (Na(OH)), uses **1314-13-2, Zinc oxide** (
ZnO), uses 1314-84-7, Zinc phosphide (Zn3P2)
1317-38-0, Copper oxide (CuO), uses 1317-39-1, Copper oxide (Cu2O), uses 1319-77-3 1320-44-1 1322-14-1 1323-00-8
1327-53-3, Arsenic oxide (As2O3) 1330-43-4, Boron sodium oxide (B4Na2O7) 1331-83-5 1332-07-6 1332-65-6, Copper chloride hydroxide (Cu2Cl(OH)3) 1333-53-5 1333-58-0 1333-82-0, Chromium oxide (CrO3) 1333-83-1, Sodium fluoride (Na(HF2))
1334-78-7 1335-10-0 1335-12-2 1335-46-2 1341-49-7, Ammonium fluoride ((NH4)(HF2)) 1405-92-1 1414-45-5, Nisin A
1438-94-4 1446-61-3 1490-04-6 1634-02-2 1643-20-5
1696-17-9 1715-30-6 1777-82-8 1854-23-5 1854-26-8
1875-89-4 1885-38-7 1892-43-9 1897-45-6 1983-10-4
2016-56-0 2019-69-4 2032-65-7 2050-08-0 2090-05-3
2104-96-3 2120-70-9 2155-70-6 2216-51-5 2224-44-4
2244-16-8 2244-21-5 2275-23-2 2279-96-1, Butanediperoxoic acid 2305-25-1 2310-17-0 2372-82-9 2374-05-2 2390-68-3
2436-90-0 2439-10-3 2445-76-3 2463-53-8, 2-Nonenal
2491-38-5 2492-26-4 2500-83-6 2527-57-3 2527-58-4
2565-36-8 2571-88-2 2631-40-5 2634-33-5, 1,2-Benzisothiazol-3(2H)-one 2639-63-6 2682-20-4 2756-56-1
2782-57-2 2832-19-1 2871-78-5 2875-41-4D, Glycine, N-(3-aminopropyl)-, N'-C10-16-alkyl derivs., hydrochlorides
2893-78-9 2921-88-2 3006-10-8 3033-23-6 3064-70-8
3090-35-5 3142-72-1 3228-02-2 3302-10-1 3313-92-6
3332-27-2 3380-34-5 3383-96-8 3398-33-2 3547-33-9
3586-55-8 3691-35-8 3696-28-4 3697-42-5 3710-84-7
3766-81-2 3784-03-0 3785-34-0 3811-68-5 3811-73-2
3811-75-4 3851-97-6 3926-62-3D, Acetic acid, chloro-, sodium salt, reaction products with 4,5-dihydro-1H-imidazole-1-ethanol 2-norcoco alkyl derivs. and sodium hydroxide 3926-62-3D, Sodium chloroacetate, reaction products with B-C12-18 alkylmethylenediamines 3984-22-3 4075-81-4 4080-31-3
4151-50-2 4169-04-4 4180-23-8 4182-44-9 4191-73-5
4247-02-3 4299-07-4 4299-60-9 4317-72-0 4317-79-7
4342-36-3 4454-05-1D, reaction products with ethanol 4525-33-1
4574-04-3 4602-84-0 4707-47-5 4719-04-4 4724-48-5
4824-78-6 4940-11-8 5026-62-0 5039-78-1 5153-25-3
5197-80-8 **5329-14-6**, Sulfamic acid 5332-73-0
5392-40-5 5395-50-6 5437-45-6 5454-19-3 5462-06-6
5471-51-2 5538-94-3 5538-95-4 5598-13-0 5625-90-1
5725-96-2 5836-29-3 5915-41-3 5972-76-9 6001-64-5
6011-99-0 6051-03-2 6152-33-6 6317-18-6 6324-78-3
6378-65-0 6413-26-9 6440-58-0 6485-40-1 6542-37-6
6582-31-6 6834-92-0 6843-97-6 **6915-15-7** 6939-35-1
6988-21-2 7080-50-4 7166-19-0 7173-51-5 7173-62-8

7281-04-1 7287-19-6 7320-34-5 7378-99-6 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7446-20-0, Zinc sulfate heptahydrate 7491-20-5 7491-21-6 7492-67-3 7540-51-4 7549-37-3 7553-56-2, Iodine, uses 7601-54-9D, Trisodium phosphate, chlorinated 7631-89-2 7631-90-5 7632-04-4 7637-07-2D, Boron trifluoride, reaction products with 2-propanol and 5-ethylidenebicyclo[2.2.1]hept-2-ene 7640-33-7 7646-85-7, Zinc chloride (ZnCl2), uses **7647-01-0**, Hydrochloric acid, uses 7647-15-6, Sodium bromide (NaBr), uses 7664-38-2, Phosphoric acid, uses 7664-41-7, Ammonia, uses **7664-93-9**, Sulfuric acid, uses 7681-49-4, Sodium fluoride (NaF), uses 7681-52-9 7681-55-2 7681-57-4 7681-93-8 7696-12-0 **7697-37-2**, Nitric acid, uses 7699-45-8, Zinc bromide (ZnBr2) 7704-34-9, Sulfur, uses 7722-64-7 7722-84-1, Hydrogen peroxide (H2O2), uses 7722-86-3, Peroxymonosulfuric acid 7726-95-6, Bromine, uses 7727-21-1 7733-02-0 7747-35-5 7757-81-5 7757-83-7 7758-02-3, Potassium bromide (KBr), uses 7758-19-2 7758-89-6, Copper chloride (CuCl) 7758-98-7, Sulfuric acid copper(2+) salt (1:1), uses 7758-99-8 7775-09-9 7775-27-1 7778-39-4, Arsenic acid (H3AsO4) (bactericide combinations in detergents)

IT 7778-43-0 7778-50-9 7778-54-3 7778-66-7 7779-27-3 7779-73-9 7779-78-4 7779-81-9 7782-44-7, Oxygen, uses 7782-50-5, Chlorine, uses 7783-20-2, Sulfuric acid diammonium salt, uses 7783-90-6, Silver chloride (AgCl), uses 7786-29-0 7786-30-3, Magnesium chloride (MgCl2), uses 7789-09-5 7789-12-0 7789-29-9, Potassium fluoride (K(HF2)) 7789-33-5, Iodine bromide (IBr) 7790-28-5 7790-99-0, Iodine chloride (ICl) 7803-51-2, Phosphine 8000-41-7, Terpineol 8007-35-0 8018-01-7 9001-37-0 9002-91-9 9003-07-0D, Polypropylene, phenol derivs. 9003-29-6 9003-63-8 9003-99-0, Peroxidase 9004-82-4 9004-98-2 10028-15-6, Ozone, uses 10031-43-3 10032-15-2 **10043-35-3**, Boric acid (H3BO3), uses 10049-04-4, Chlorine oxide (ClO2) 10058-23-8 10101-41-4 10124-37-5 10154-75-3 10187-52-7 10198-23-9 10222-01-2 10222-01-2 10235-63-9 10294-64-1 10332-33-9 10339-55-6 10345-79-6 10377-60-3 10378-23-1 10380-28-6 10453-86-8 10460-00-1 10482-56-1 10486-00-7 10543-57-4 10588-01-9 10588-15-5 10595-49-0 10605-21-7 10605-21-7D, Methyl 1H-benzimidazol-2-ylcarbamate, compds. with benzenesulfonic acid mono-C10-14-alkyl derivs. 11031-45-1, Santalol 11050-62-7 11084-85-8, Sodium hypochlorite phosphate (Na13(ClO)(PO4)4) 11096-42-7 12008-41-2, Boron sodium oxide (B8Na2O13) 12062-24-7 12069-69-1 12122-67-7 12124-97-9, Ammonium bromide ((NH4)Br) 12179-04-3 12267-73-1 12280-03-4 12427-38-2 13014-03-4 13019-22-2, 9-Decen-1-ol 13052-19-2 13108-52-6 13149-79-6 13167-25-4 13197-76-7 13254-34-7 13351-61-6 13426-91-0 13435-05-7 13463-41-7 13463-67-7, Titanium oxide (TiO2), uses 13516-27-3 13517-11-8, Hypobromous acid 13532-18-8 13590-97-1 13701-59-2 13707-65-8 13720-12-2 13755-29-8 13824-96-9 13826-83-0 13840-33-0 13863-41-7, Bromine chloride (BrCl) 13877-91-3 13980-04-6 14073-97-3 14371-10-9 14548-60-8 14576-08-0 14667-55-1 14676-61-0D, 1-Propanamine, 3-(tridecyloxy)-, branched 14762-38-0 14816-18-3 14915-37-8 14936-67-5 15323-35-0 15435-29-7 15510-55-1 15627-09-5 15630-89-4 15707-23-0 15733-22-9 15739-09-0 15809-19-5 15986-80-8 16079-88-2 16219-75-3D, 5-Ethylidenebicyclo[2.2.1]hept-2-ene, reaction products with boron trifluoride and 2-propanol 16228-00-5 16409-43-1 16491-36-4 16752-77-5 16828-95-8 16871-71-9

16893-85-9 16919-19-0 16949-65-8 16961-83-4 17084-08-1
17342-21-1 17804-35-2 18181-70-9 18181-80-1 18205-85-1
18339-16-7 18472-51-0 18479-54-4 18479-57-7 18675-16-6
18675-17-7 18794-84-8 18829-56-6 18854-01-8 18972-56-0
19014-05-2 19093-20-0 19379-90-9 19388-87-5 19578-81-5
19766-89-3 19819-98-8 19870-74-7 20013-73-4 20018-09-1
20543-04-8 20545-92-0 20662-57-1 20679-58-7 20834-59-7
20859-73-8, Aluminum phosphide (AlP) 21129-27-1 21145-77-7
21564-17-0 21757-82-4 21834-92-4 22009-37-6 22205-45-4,
Copper sulfide (Cu2S) 22221-10-9 22248-79-9 22781-23-3
22882-89-9 22882-91-3 22936-75-0 22981-54-0 23031-36-9
23495-12-7 23560-59-0 23564-05-8 23726-92-3 23726-94-5
23787-90-8 24019-05-4 24048-13-3 24111-17-9 24124-25-2
24291-45-0 24634-61-5 24720-09-0 24851-98-7 25068-14-8
25155-18-4 25155-29-7 25167-82-2 25225-10-9 25254-50-6
25265-71-8 25304-14-7 25377-70-2 25628-84-6 25655-41-8
25988-97-0 26002-80-2 26062-79-3 26172-55-4 26248-98-6
26354-18-7 26530-03-0 26530-20-1 26545-49-3 26617-87-8
26635-93-8 26781-23-7 27083-27-8 27176-87-0 27236-65-3
27253-29-8 27323-41-7 27697-50-3 28069-74-1 28159-98-0
28219-61-6 28302-36-5 28387-62-4 28434-00-6 28434-01-7
28558-32-9 28645-51-4, Oxacycloheptadec-10-en-2-one 28728-61-2
28772-56-7 28777-01-7 28805-58-5 29232-93-7 29350-73-0
(bactericide combinations in detergents)

IT **65-85-0**, Benzoic acid, uses
(r; bactericide combinations in detergents)

L72 ANSWER 26 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:338671 HCAPLUS
DOCUMENT NUMBER: 134:354862
TITLE: Detergents or cleaning agents
INVENTOR(S): Lange, Ilona; Ditze, Alexander; Gies, Birgit; Soldanski, Heinz-Dieter; Wendt, Heike; Nitsch, Christian; Hardt, Thomas
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032820	A1	20010510	WO 2000-EP10393	2000 1021
W: AU, BR, CA, CN, CZ, DZ, HU, ID, IL, IN, JP, KR, MX, PL, RO, RU, SG, SI, SK, TR, UA, US, ZA				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19952383	A1	20010517	DE 1999-19952383	1999 1030
EP 1224256	A1	20020724	EP 2000-978973	2000 1021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,				

MC, PT, IE, SI, FI, RO, CY

PRIORITY APPLN. INFO.: DE 1999-19952383 A 1999 1030

WO 2000-EP10393 W 2000 1021

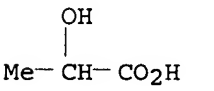
OTHER SOURCE(S): MARPAT 134:354862

AB The detergents or cleaning agents contain surfactants and optionally other conventional ingredients, as well as 0.5-20% particles with a particle size of 5-500 nm. The agents impart to the surface to be cleaned temporary dirt-repellent properties. The particles are preferably SiO2, Mg(OH)2, Al(O)OH, ZrO2, **ZnO**, CeO2, Fe2O3, Fe3O4, TiO2, TiN, hydroxylapatite, bentonite, hectorite, SiO2.CeO2, SnO2, In2O3.SnO2, and/or HfO2, the surface of which has preferably been modified with phosphonates or heavy metal-complexing agents. The particles are intended to remain temporarily on the surface being cleaned, essentially completely covering it and rendering it hydrophilic.

IT **50-21-5**, Lactic acid, uses **87-69-4**, Tartaric acid, uses **526-95-4**, Gluconic acid **6915-15-7**, Malic acid
(detergents or cleaning agents containing nanoparticles with surfaces modified by)

RN 50-21-5 HCAPLUS

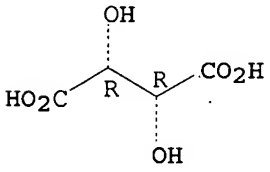
CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



RN 87-69-4 HCAPLUS

CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)- (9CI) (CA INDEX NAME)

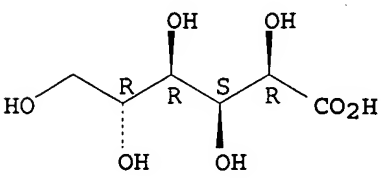
Absolute stereochemistry.



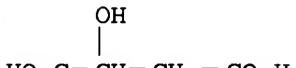
RN 526-95-4 HCAPLUS

CN D-Gluconic acid (9CI) (CA INDEX NAME)

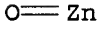
Absolute stereochemistry.



RN 6915-15-7 HCAPLUS
CN Butanedioic acid, hydroxy- (9CI) (CA INDEX NAME)



IT **1314-13-2, Zinc oxide**, uses
(surface-modified; detergents or cleaning agents containing hydrophilic nanoparticles)
RN 1314-13-2 HCAPLUS
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



IC ICM C11D017-00
ICS C11D003-12
CC 46-6 (Surface Active Agents and **Detergents**)
ST particulate hydrophilizing agent **detergent compn**
; nanoscale particle hydrophilizing agent
IT **50-21-5**, Lactic acid, uses 60-00-4, EDTA, uses
77-92-9, Citric acid, uses **87-69-4**, Tartaric acid, uses
139-13-9, NTA **526-95-4**, Gluconic acid 2809-21-4,
1-Hydroxyethane-1,1-diphosphonic acid 6419-19-8,
Nitrilotris(methylenephosphonic acid) **6915-15-7**, Malic
acid 15827-60-8, Diethylenetriaminepentakis(methylenephosphonic
acid) 37971-36-1, 2-Phosphonobutane-1,2,4-tricarboxylic acid
(detergents or cleaning agents containing nanoparticles with
surfaces modified by)
IT 1306-06-5, Hydroxylapatite 1306-38-3, Ceric oxide, uses
1309-37-1, Ferric oxide, uses 1309-42-8, Magnesium hydroxide
1314-13-2, Zinc oxide, uses
1314-23-4, Zirconium dioxide, uses 1317-61-9, Iron oxide
(Fe3O4), uses 1318-23-6, Boehmite 7631-86-9, Silica, uses
12055-23-1, Hafnium oxide 12173-47-6, Hectorite 13463-67-7,
Titanium dioxide, uses 18282-10-5, Stannic oxide 25583-20-4,
Titanium nitride 58440-24-7, Indium tin oxide (In_2SnO_5)
317832-92-1, Cerium silicate ($CeSiO_4$)
(surface-modified; detergents or cleaning agents containing
hydrophilic nanoparticles)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 27 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:36219 HCAPLUS
DOCUMENT NUMBER: 134:58274
TITLE: Polyoxyethylene alkyl carboxymethyl ether divalent metal salts for detergent compositions and their preparation
INVENTOR(S): Sun, Baoxing
PATENT ASSIGNEE(S): Green Chemical Products Research Center, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.

CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1255485	A	20000607	CN 1999-117217	19991115
CN 1086185	B	20020612		

PRIORITY APPLN. INFO.: CN 1999-117217 19991115

OTHER SOURCE(S): MARPAT 134:58274

AB The polyoxyethylene alkyl carboxymethyl ether divalent metal salt [RO(CH2CH2O)nCH2COO]2M (R = C1-30 alkyl; M = divalent metal ion; n = 1-50) is prepared by reacting a polyoxyethylene monoalkyl ether (e.g., polyoxyethylene monotetradecyl ether) with chloroacetic acid at 1-150° with continuously adding Na2CO3, K2CO3, NaOH, or KOH, removing the salt, and mixing with a divalent metal salt (e.g., magnesium chloride hexahydrate). The polyoxyethylene alkyl carboxymethyl ether divalent metal salts are useful as surfactants in detergent compns. having good detergency and biodegradability.

IT **7646-85-7**, Zinc chloride, reactions
(preparation of polyoxyethylene alkyl carboxymethyl ether divalent metal salts for **cleaning compns.**)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C07C059-125
ICS C07C051-41

CC 46-6 (Surface Active Agents and **Detergents**)

IT 79-11-8, Chloroacetic acid, reactions **7646-85-7**, Zinc chloride, reactions 7786-30-3, Magnesium chloride, reactions 9002-92-0, Polyethylene glycol monododecyl ether 9005-00-9, Polyethylene glycol monooctadecyl ether 10034-99-8, Magnesium sulfate heptahydrate 13477-34-4, Calcium nitrate tetrahydrate 24938-91-8, Polyethylene glycol monotridecyl ether 27306-79-2, Polyethylene glycol monotetradecyl ether
(preparation of polyoxyethylene alkyl carboxymethyl ether divalent metal salts for **cleaning compns.**)

L72 ANSWER 28 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:688339 HCAPLUS
DOCUMENT NUMBER: 133:268593
TITLE: **Liquid** automatic **dishwashing composition** with glassware protection and its use
INVENTOR(S): Keyes, George B.; Seaman, Charles E.; Kassen, Jon K.
PATENT ASSIGNEE(S): S. C. Johnson Commercial Markets, Inc., USA

SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056851	A1	20000928	WO 2000-US6129	2000 0309
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6083894	A	20000704	US 1999-272133	1999 0319
US 6448210	B1	20020910	US 2000-504360	2000 0215
GB 2364324	A1	20020123	GB 2001-24033	2000 0309
GB 2364324	B2	20040121		

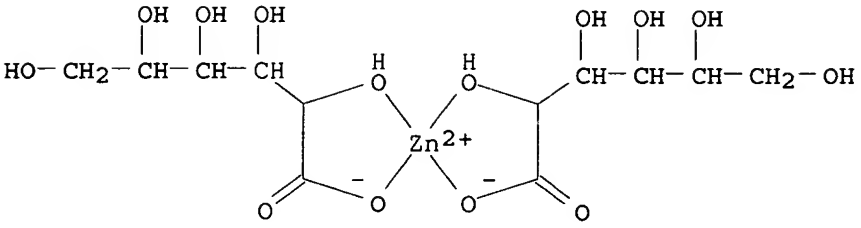
PRIORITY APPLN. INFO.:		
US 1999-272133	A	1999 0319
US 2000-504360	A	2000 0215
WO 2000-US6129	W	2000 0309

AB A **liquid dishwashing detergent composition** having improved glassware protection when employed in conjunction with cleaning materials having high concns. of alkaline materials contains a soluble organic zinc compound which preferably is zinc gluconate and is particularly suited to fast cycle com. (I & I) **dishwashers.** The zinc gluconate is prepared in situ or zinc and gluconic ions are provided in a batching process.

IT **4468-02-4**, Zinc gluconate
(in **liquid** automatic **dishwashing compns.** with glassware protection)

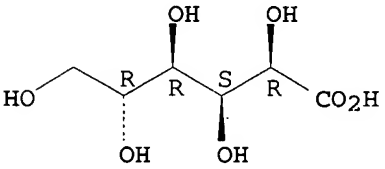
RN 4468-02-4 HCAPLUS

CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



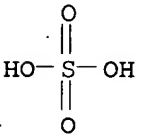
IT **526-95-4**, Gluconic acid **1314-13-2**, **Zinc oxide**, reactions **7733-02-0**, Zinc sulfate
(source of zinc gluconate; in **liquid** automatic **dishwashing compns.** with glassware protection)
RN 526-95-4 HCAPLUS
CN D-Gluconic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1314-13-2 HCAPLUS
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)

RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



IC ICM C11D003-20
ICS C11D007-06; C11D007-26
CC 46-6 (Surface Active Agents and **Detergents**)
ST zinc gluconate **dishwasher** detergent glassware protection
IT **Detergents**
(**dishwashing, liquid; liquid** automatic **dishwashing compns.** with glassware protection)
IT Glass, uses

(**liquid** automatic **dishwashing compns**
. with glassware protection)
IT 64-02-8, EDTA tetrasodium salt **4468-02-4**, Zinc gluconate
5064-31-3, Trisodium nitrilotriacetate
(in **liquid** automatic **dishwashing**
compns. with glassware protection)
IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium
hydroxide, uses
(in **liquid** automatic **dishwashing**
compns. with glassware protection)
IT **526-95-4**, Gluconic acid 527-07-1, Sodium gluconate
1314-13-2, **Zinc oxide**, reactions
7733-02-0, Zinc sulfate
(source of zinc gluconate; in **liquid** automatic
dishwashing compns. with glassware
protection)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 29 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:454294 HCAPLUS
DOCUMENT NUMBER: 133:75677
TITLE: **Liquid** automatic **dishwashing**
composition with glassware protection
from hard water wash
INVENTOR(S): Keyes, George B.; Seaman, Charles; Kassen, Jon K.
PATENT ASSIGNEE(S): S. C. Johnson Commercial Markets, Inc., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6083894	A	20000704	US 1999-272133	1999 0319
US 6448210	B1	20020910	US 2000-504360	2000 0215
WO 2000056851	A1	20000928	WO 2000-US6129	2000 0309

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

GB 2364324	A1	20020123	GB 2001-24033	

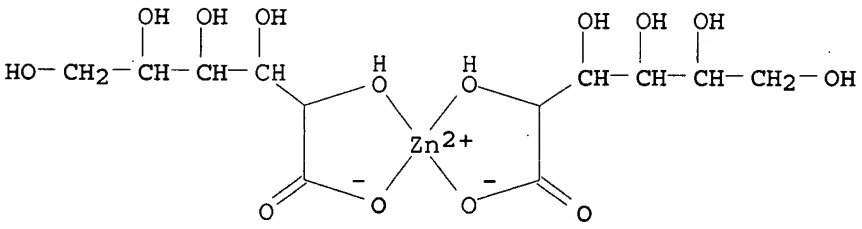
					2000 0309
GB 2364324	B2	20040121			
ES 2192976	A1	20031016	ES 2001-50071		2000 0309
ES 2192976	B2	20040801			
PRIORITY APPLN. INFO.:			US 1999-272133	A2	1999 0319
			US 2000-504360	A	2000 0215
			WO 2000-US6129	W	2000 0309

AB A **liquid dishwashing detergent composition** provides improved glassware protection when employed in conjunction with cleaning materials having high concns. of alkaline materials. The composition contains a soluble organic Zn compound, preferably Zn gluconate, and is particularly suited to fast cycle com. **dishwashers.** An example **dishwashing** detergent contained H2O 17.20, trisodium NTA 68.50, NaOH 4.00, KOH 5.00, Dequest 2010 0.3, and zinc gluconate 5.00%.

IT **4468-02-4**, Zinc gluconate
(**liquid** automatic **dishwashing compn**
. containing soluble zinc salts for reduced corrosion of glassware in com. **dishwashing** apparatus)

RN 4468-02-4 HCAPLUS

CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



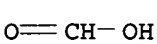
IT **557-34-6**, Zinc acetate **557-41-5**, Zinc formate
(**liquid** automatic **dishwashing compn**
. containing soluble zinc salts for reduced corrosion of glassware in com. **dishwashing** apparatus)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

●1/2 Zn

RN 557-41-5 HCAPLUS
CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D007-06
ICS C11D007-16
INCL 510221000
CC 46-5 (Surface Active Agents and **Detergents**)
ST zinc gluconate **dishwashing** detergent; **liq** automatic **dishwashing detergent** glassware protection
IT **Detergents**
(**dishwashing**; **liquid** automatic **dishwashing composition** containing soluble zinc salts for reduced corrosion of glassware in com. **dishwashing** apparatus)
IT Glass, uses
(glassware; **liquid** automatic **dishwashing composition** containing soluble zinc salts for reduced corrosion of glassware in com. **dishwashing** apparatus)
IT 64-02-8, Tetrasodium EDTA 2809-21-4, Dequest 2010 5064-31-3
(chelate; **liquid** automatic **dishwashing composition** containing soluble zinc salts for reduced corrosion of glassware in com. **dishwashing** apparatus)
IT **4468-02-4**, Zinc gluconate
(**liquid** automatic **dishwashing compn**
. containing soluble zinc salts for reduced corrosion of glassware in com. **dishwashing** apparatus)
IT **557-34-6**, Zinc acetate **557-41-5**, Zinc formate 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses
(**liquid** automatic **dishwashing compn**
. containing soluble zinc salts for reduced corrosion of glassware in com. **dishwashing** apparatus)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 30 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:113737 HCAPLUS
DOCUMENT NUMBER: 130:169841
TITLE: Process for preparing ether-capped poly(oxyalkylated) alcohols for use as

nonionic surfactants with low foaming property

INVENTOR(S): Sivik, Mark Robert
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9906468	A1	19990211	WO 1998-US16034	1998 0731
W: BR, CA, MX, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2297831	AA	19990211	CA 1998-2297831	1998 0731
EP 998517	A1	20000510	EP 1998-938252	1998 0731
EP 998517	B1	20031015		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9811816	A	20000815	BR 1998-11816	1998 0731
AT 252127	E	20031115	AT 1998-938252	1998 0731
ES 2205531	T3	20040501	ES 1998-938252	1998 0731
US 6365785	B1	20020402	US 2000-485137	2000 0202

PRIORITY APPLN. INFO.:	US 1997-54702P	P	1997 0802
	WO 1998-US16034	W	1998 0731

AB The surfactants are compds. R1O[CH2CH(R3)O]xCH2CH(OH)CH2OR2 (R1, R2 = linear or branched, saturated or unsatd., aliphatic or aromatic hydrocarbyl groups having from 1 to 30 carbon atoms; R3 = H, or a linear aliphatic hydrocarbyl groups having from 1 to 4 carbon atoms; x = 6-15; when x is 2 or greater R3 may be the same or different; further wherein when x is 15 or greater and R3 is H and Me, at least 4 of R3 are Me, further wherein when x is 15 or greater and R3 includes H and from 1 to 3 Me groups, then at least 1 R3 is Et, Pr or Bu, further wherein R2 can optionally be alkoxylated, wherein said alkoxy is selected from ethoxy, propoxy, butyloxy and mixts. thereof) and prepared by reacting a glycidyl ether bearing R2 as ether group with a poly(oxyalkylated) alc. The surfactants

have superior spotting and filming benefits in **dishwashing** and hard surface cleaning applications, as well as suds suppression in **detergent compns.** Thus, heating 16.60 g Neodol 91-8 (ethoxylated C9-11 alc.) with 0.25 mL Sn(IV) chloride to 60°, adding dropwise 10.00 g C12-14 alkyl glycidyl ether to the resulting mixture over 15 min while maintaining at 75-80°, stirring at 60° for 18 h and at 75° for 1 h, , cooling and working up gave an oil. An automatic **dishwashing detergent** was **formulated** from Na tripolyphosphate 24.0, Na2CO3 20.0, hydrate silica 15, 15, the oil 2.0, Tergitol 15S9 (nonionic surfactant) 1.0, an acrylic polymer 4.0, 4%-active protease 0.83, 0.8%-active amylase 0.5, 15.5%-active perborate monohydrate 14.5, Co catalyst 0.008, and balance of water, Na2SO4 and miscellaneous to 100%.

IT **7646-85-7**, Zinc chloride, uses
(catalyst; process for preparing ether-capped poly(oxyalkylated) alcs. for use as nonionic surfactants with low foaming property)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C08G065-26
ICS C08G065-22; C11D001-72

CC 46-3 (Surface Active Agents and **Detergents**)

ST nonionic surfactant ether capped alkoxylated alc low foaming; spotting suppression nonionic surfactant ether capped alkoxylated alc; sud suppression nonionic surfactant ether capped alkoxylated alc; automatic **dishwashing** detergent ether capped alkoxylated alc; cleaning detergent ether capped alkoxylated alc

IT Detergents
(**dishwashing**; process for preparing ether-capped poly(oxyalkylated) alcs. for use as nonionic surfactants with low foaming property)

IT **Detergents**
(**liquid**; process for preparing ether-capped poly(oxyalkylated) alcs. for use as nonionic surfactants with low foaming property)

IT 109-63-7 7446-70-0, Aluminum chloride, uses 7550-45-0, Titanium chloride, uses 7646-78-8, Tin(IV) chloride, uses **7646-85-7**, Zinc chloride, uses
(catalyst; process for preparing ether-capped poly(oxyalkylated) alcs. for use as nonionic surfactants with low foaming property)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 31 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:493233 HCAPLUS
DOCUMENT NUMBER: 129:137670
TITLE: Enzyme compositions and methods for contact lens cleaning
INVENTOR(S): Huth, Stanley W.
PATENT ASSIGNEE(S): Allergan, USA
SOURCE: U.S., 12 pp., Cont.-in-part of U.S. 5,630,884.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

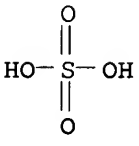
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5783532	A	19980721	US 1996-696708	1996 0814
US 5630884	A	19970520	US 1996-673993	1996 0701
US 5746838	A	19980505	US 1996-755801	1996 1122
US 6165954	A	20001226	US 1998-20664	1998 0209
PRIORITY APPLN. INFO.:			US 1993-79195 B1	1993 0617
			US 1994-343284 B3	1994 1122
			US 1996-673993 A2	1996 0701
			US 1996-755801 A3	1996 1122

AB The title compns. (tableted) comprise an enzyme (e.g. Subilisin A) which is released rapidly in a liquid medium to remove debris from a contact lens and an activity regulating component such as a base, metal salt, etc. which is released later to deactivate the enzyme, optionally a disinfectant.

IT **7733-02-0**, Zinc sulfate
(enzyme **compns.** for **cleaning** contact lens with delayed deactivation of enzyme)

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D003-00

INCL 510114000
CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 63
IT 139-33-3, EDTA, disodium salt 7632-05-5, Sodium phosphate
7733-02-0, Zinc sulfate
(enzyme **compns.** for **cleaning** contact lens
with delayed deactivation of enzyme)
REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 32 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:552569 HCAPLUS
DOCUMENT NUMBER: 127:150425
TITLE: Household hard surface liquid cleaning compositions
INVENTOR(S): Gordon, Neil James; Reniers, Vincent; Willey, Alan David
PATENT ASSIGNEE(S): Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9724425	A1	19970710	WO 1995-US17044	19951229
W: AU, CA, CN, CZ, HU, JP, MX, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2241815	AA	19970710	CA 1995-2241815	19951229
CA 2241815	C	20030527		
AU 9646486	A1	19970728	AU 1996-46486	19951229
EP 876458	A1	19981111	EP 1995-944437	19951229
EP 876458	B1	20000809		
EP 876458	B2	20041208		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 11501978	T2	19990216	JP 1995-524289	19951229
CN 1209831	A	19990303	CN 1995-198022	19951229
HU 78046	A2	19990728	HU 1999-830	19951229
ES 2148594	T3	20001016	ES 1995-944437	19951229

					1229
PT 876458	T	20001229	PT 1995-944437		
					1995
					1229
US 5990066	A	19991123	US 1998-101072		
					1998
					0612
GR 3034496	T3	20001229	GR 2000-402185		
					2000
					0928
PRIORITY APPLN. INFO.:			CA 1995-2241815	A	
					1995
					1229
			CN 1995-198022	A	
					1995
					1229
			EP 1995-944437	A	
					1995
					1229
			WO 1995-US17044	A	
					1995
					1229

AB The title compns. provide excellent gloss to the surfaces cleaned therewith and comprise a surfactant, a carboxylate-containing polymer (A) and a divalent counter ion (B) in A/B molar ratio of 12:1 to 1:32. The inclusion of A and B improves the gloss of cleaned surface. In an example, Sokolan CP5 and $CaCl_2.2H_2O$ were used as A and B, resp., beside other ordinary surfactants and additives.

IT **7646-85-7**, Zinc chloride ($ZnCl_2$), uses
(household hard surface **liquid cleaning compns.**)

RN 7646-85-7 HCAPLUS

CN Zinc chloride ($ZnCl_2$) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D003-37
ICS C11D003-22; C11D017-00; C11D003-02

CC 46-6 (Surface Active Agents and **Detergents**)

IT 7487-88-9, Magnesium sulfate, uses **7646-85-7**, Zinc chloride ($ZnCl_2$), uses 9004-32-4 10043-52-4, Calcium chloride ($CaCl_2$), uses 58339-75-6, Primal B 924
(household hard surface **liquid cleaning compns.**)

L72 ANSWER 33 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:509236 HCAPLUS

DOCUMENT NUMBER: 127:207337

TITLE: Thermoplastic polymer compositions as cleaning agents for molding apparatus

INVENTOR(S): Nakajima, Yoichi; Saito, Takanori

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09194628	A2	19970729	JP 1996-22971	19960117
JP 3579700	B2	20041020		

PRIORITY APPLN. INFO.: JP 1996-22971 19960117

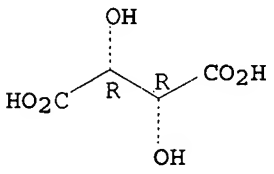
AB Title compns. contain thermoplastics, polyol higher fatty acid partial ester-H_3BO_3 complexes, and ≥1 metal compds. chosen from oxides, hydroxides, carbonates, phosphates, silicates, hydrotalcites, Li-Al mixed hydroxides, fatty acid salts, aliphatic hydroxy acid salts, and aliphatic phosphates. Thus, high-d. polyethylene 90.1, glyceryl monostearate borate 9.5, MgO 0.3, phenol antioxidant 0.05, and P-containing antioxidant 0.05% were mixed to give a detergent, which show good removing of ABS resin residue on an injection molding apparatus

IT **551-64-4**, Zinc tartrate, uses
(**detergent compns.**; for **cleaning** molding apparatus for plastics)

RN 551-64-4 HCAPLUS

CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, zinc salt (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Zn

IC ICM C08K005-00
ICS C08L101-00

CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 38

IT 72-17-3, Sodium lactate 127-09-3, Sodium acetate 144-55-8, Carbonic acid monosodium salt, uses 471-34-1, Calcium carbonate, uses 497-19-8, Sodium carbonate, uses 546-89-4, Lithium acetate 546-93-0D, Magnesium carbonate, basic **551-64-4**, Zinc tartrate, uses 554-13-2, Lithium carbonate 584-08-7, Potassium carbonate 814-80-2, Calcium lactate 1305-62-0, Calcium hydroxide, uses 1305-78-8, Calcium oxide, uses 1309-42-8, Magnesium hydroxide 1312-76-1, Potassium silicate 1314-13-2, Zinc oxide, uses 1338-43-8D, boron complexes 1343-88-0, Magnesium silicate 1344-09-8, Sodium silicate

1344-28-1, Aluminum oxide, uses 1592-23-0, Calcium stearate 3164-85-0, Potassium 2-ethylhexanoate 3486-35-9, Zinc carbonate 4040-48-6, Magnesium laurate 7440-42-8D, Boron, complexes with sorbitan monooleate, uses 7558-79-4, Disodium hydrogen phosphate 7778-49-6, Potassium citrate 7778-53-2, Potassium phosphate 7779-90-0, Zinc phosphate 10043-83-1, Magnesium phosphate 10103-46-5, Calcium phosphate 10377-52-3, Lithium phosphate 11097-59-9, HDT 4A 12627-14-4, Lithium silicate 14807-96-6, Talc, uses 20427-58-1, Zinc hydroxide 21645-51-2, Aluminum hydroxide, uses 31142-56-0, Aluminum citrate 39663-84-8, Lithium glycolate 52660-30-7 134206-92-1 136939-35-0, Mizukalac 149725-09-7 168832-54-0, Zinc octadecanoyl lactate 194553-23-6 194553-24-7 194553-25-8 194553-26-9 194553-27-0 194553-28-1 194553-29-2 194553-31-6
(**detergent compns.**; for **cleaning** molding apparatus for plastics)

L72 ANSWER 34 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:509235 HCAPLUS
DOCUMENT NUMBER: 127:207336
TITLE: Thermoplastic polymer **compositions** as **detergents** for cleaning molding apparatus
INVENTOR(S): Nakajima, Yoichi; Saito, Takanori
PATENT ASSIGNEE(S): Chisso Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09194627	A2	19970729	JP 1996-22970	1996 0117
JP 3579699	B2	20041020		
PRIORITY APPLN. INFO.:			JP 1996-22970	1996 0117

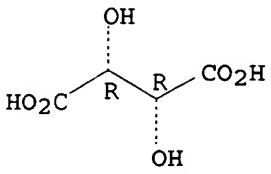
AB Title compns. contain thermoplastics, polyol higher fatty acid partial esters, H_3BO_3, and ≥1 metal compds. chosen from oxides, hydroxides, carbonates, phosphates, silicates, hydrotalcites, Li-Al mixed hydroxides, fatty acid salts, aliphatic hydroxy acid salts, and aliphatic phosphates. Thus, high-d. polyethylene 89.3, glyceryl monostearate 9.5, H_3BO_3 0.8, MgO 0.3, phenol antioxidant 0.05, and P-containing antioxidant 0.05% were mixed to give a detergent, which show good removing of ABS resin residue on an injection molding apparatus

IT **551-64-4**, Zinc tartrate, uses **1314-13-2**, **Zinc oxide**, uses **10043-35-3**, Boric acid, uses
(**cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

RN 551-64-4 HCAPLUS
CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, zinc salt (1:1) (9CI)

(CA INDEX NAME)

Absolute stereochemistry.

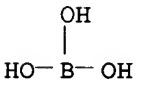


● Zn

RN 1314-13-2 HCAPLUS
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)

O═Zn

RN 10043-35-3 HCAPLUS
CN Boric acid (H3BO3) (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C08K005-00
ICS C08L101-00; C11D007-02; C11D007-06; C11D007-08; C11D007-12; C11D007-14; C11D007-16; C11D007-22; C11D007-26
CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 38
ST thermoplastic detergent molding app cleaning; polyol fatty ester thermoplastic mold cleaning; boric acid **compn** **cleaning** molding app; carbonate molding app **cleaning compn**; phosphate molding app **cleaning compn**; silicate molding app **cleaning compn**; hydroxide molding app **cleaning compn**; oxide molding app **cleaning compn**; glyceride molding app **cleaning compn**
IT Ethylene-propylene rubber
(**cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)
IT Carbonates, uses
Hydroxides (inorganic)
Oxides (inorganic), uses
Phosphates, uses
Silicates, uses
(**cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)
IT Carboxylic acids, uses
(hydroxy, salts, **cleaning compns.**;

thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT Fatty acids, uses
Fatty acids, uses
(long-chain, esters, **cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT Fatty acids, uses
(metal salts, **cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT Alcohols, uses
(polyhydric, esters, **cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT **Detergents**
Molding apparatus for plastics and rubbers
Molds (forms)
(thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT Plastics, uses
(thermoplastics, **cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6, Styron 600 9003-56-9 24937-78-8, Ultrathene 631
(**cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT 72-17-3, Sodium lactate 106-14-9D, basic magnesium salt 127-09-3, Sodium acetate 144-55-8, Carbonic acid monosodium salt, uses 471-34-1, Calcium carbonate, uses 497-19-8, Sodium carbonate, uses 546-89-4, Lithium acetate 546-93-0D, Magnesium carbonate, basic **551-64-4**, Zinc tartrate, uses 554-13-2, Lithium carbonate 584-08-7, Potassium carbonate 814-80-2, Calcium lactate 1305-62-0, Calcium hydroxide, uses 1305-78-8, Calcium oxide, uses 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses 1312-76-1, Potassium silicate **1314-13-2**, **Zinc oxide**, uses 1338-43-8, Sorbitan monooleate 1343-88-0, Magnesium silicate 1344-09-8, Sodium silicate 1344-28-1, Aluminum oxide, uses 1592-23-0, Calcium stearate 3164-85-0, Potassium 2-ethylhexanoate 3486-35-9, Zinc carbonate 4040-48-6, Magnesium laurate 7558-79-4, Disodium hydrogen phosphate 7778-49-6, Potassium citrate 7778-53-2, Potassium phosphate 7779-90-0, Zinc phosphate **10043-35-3**, Boric acid, uses 10043-83-1, Magnesium phosphate 10103-46-5, Calcium phosphate 10332-31-7, Pentaerythritol monolaurate 10377-52-3, Lithium phosphate 11097-59-9, DHT 4A 12627-14-4, Lithium silicate 14807-96-6, Talc, uses 20427-58-1, Zinc hydroxide 21645-51-2, Aluminum hydroxide, uses 31142-56-0, Aluminum citrate 31566-31-1, Glyceryl monostearate 39663-84-8, Lithium glycolate 53126-66-2, Potassium propyl phosphate 68258-72-0, Pentaerythritol dibehenate 134206-92-1 136939-35-0, Mizukalac 149725-09-7 168832-54-0, Zinc octadecanoyl lactate 194553-25-8 194553-26-9 194553-28-1 194553-29-2 194553-31-6
(**cleaning compns.**; thermoplastic **compns.** as **detergents** for cleaning molding apparatus)

IT 9010-79-1
(ethylene-propylene rubber, **cleaning compns**
.; thermoplastic **compns.** as **detergents** for
cleaning molding apparatus)

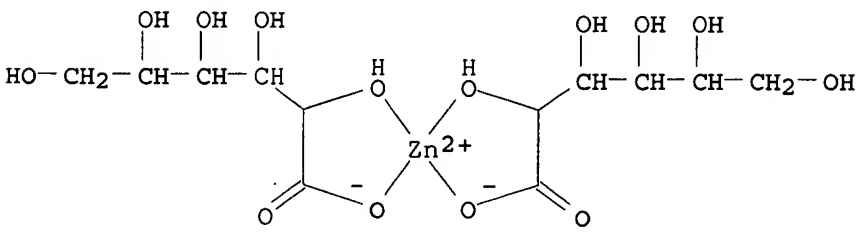
L72 ANSWER 35 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:740260 HCAPLUS
DOCUMENT NUMBER: 126:9479
TITLE: Environmentally friendly nontoxic water-soluble cleaning compositions for release of polymers from surfaces
INVENTOR(S): Sakata, Shigenobu
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08239693	A2	19960917	JP 1995-81645	1995 0302

PRIORITY APPLN. INFO.: JP 1995-81645 1995 0302

AB The compns. comprise Na chondroitinsulfate (I), cyclodextrin (II), xanthan gum (III), xylan, xylose, Na pantothenate (IV), Na pyruvate (V), Na erythorbate (VI), 4-isopropyltropone (VII), H2O, benzyl alc. (VIII), and iso-PrOH and optionally contain monosaccharides, polysaccharides, antioxidants, lactic acids, preservatives, bactericides, secondary alcs., higher alcs., amino alcs., and/or microorganisms. An aqueous solution containing 70% mixture of I ≤25, xylan 0.1-0.5, xylose 0.1-0.5, glucose 0.1-0.5, III 0.1-0.5, II 1-3, VII 0.01-0.05, IV 1-5, V 1-5, VI 1-5, 10% VIII, and 20% iso-PrOH exhibited good polymer release properties on contacting a polymer coating on a metal surface with the solution for 5-10 min at room temperature

IT **4468-02-4**, Zinc gluconate
(environment friendly nontoxic water-soluble **cleaning compns.** for release of polymers from surfaces containing)
RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM C11D007-22
ICS C11D007-26
CC 46-6 (Surface Active Agents and **Detergents**)
IT 50-14-6, Ergocalciferol 50-21-5, uses 50-70-4, D-Glucitol, uses 50-81-7, L-Ascorbic acid, uses 50-99-7, D-Glucose, uses 56-81-5, 1,2,3-Propanetriol, uses 57-48-7, D-Fructose, uses 57-50-1, Sucrose, uses 57-55-6, 1,2-Propanediol, uses 58-56-0, Pyridoxine hydrochloride 58-86-6, D-Xylose, uses 59-23-4, D-Galactose, uses 59-30-3, Folic acid, uses 59-51-8, Methionine 59-67-6, Nicotinic acid, uses 60-12-8, β-Phenylethyl alcohol 60-24-2, 2-Mercaptoethanol 63-68-3, L-Methionine, uses 63-91-2, L-Phenylalanine, uses 64-17-5, Ethanol, uses 64-19-7, Acetic acid, uses 67-56-1, Methanol, uses 67-63-0, Isopropyl alcohol, uses 67-97-0, Cholecalciferol 69-65-8, Mannit 72-18-4, L-Valine, uses 72-19-5, L-Threonine, uses 73-22-3, L-Tryptophane, uses 73-32-5, L-Isoleucine, uses 75-08-1, Ethyl mercaptan 78-98-8, Methylglyoxal 80-68-2, DL-Threonine 83-88-5, Riboflavine, uses 87-89-8, myo-Inositol 89-65-6, Erythorbic acid 90-43-7, o-Phenylphenol 92-52-4, Diphenyl, uses 94-13-3, Propyl p-hydroxybenzoate 94-26-8, Butyl p-hydroxybenzoate 97-64-3 98-00-0, Furfuryl alcohol 98-92-0, Nicotinicamide 99-76-3, Methylparaben 100-51-6, Benzyl alcohol, uses 107-18-6, Allyl alcohol, uses 110-17-8, 2-Butenedioic acid (E)-, uses 110-44-1, Sorbic acid 111-70-6, Heptyl alcohol 112-70-9, Tridecyl alcohol 112-92-5, 1-Octadecanol 113-24-6, Sodium pyruvate 120-47-8, Ethyl p-hydroxybenzoate 121-79-9, Propyl gallate 122-99-6 123-51-3 127-17-3, uses 132-27-4, Sodium o-phenylphenolate 134-03-2, Sodium L-ascorbate 137-08-6, Calcium pantothenate 137-40-6, Sodium propionate 138-22-7, Butyl lactate 143-08-8, Nonyl alcohol 299-28-5, Calcium gluconate 299-29-6, Ferrous gluconate 299-88-7, Dibenzoylthiamine 453-17-8, Triose 497-15-4, Reductone 499-44-5, 4-Isopropyltropolone 500-38-9, Nordihydroguaiaretic acid 501-94-0, p-Hydroxyphenethyl alcohol 520-45-6, Dehydroacetic acid 527-09-3, Copper gluconate 532-32-1, Sodium benzoate 547-64-8, Methyl lactate 619-73-8, p-Nitrobenzyl alcohol 628-89-7, 2-(2-Chloroethoxy)ethanol 814-80-2, Calcium lactate 867-81-2, Sodium pantothenate 1007-42-7, L-Histidine hydrochloride 1114-41-6, Muramic acid 1398-61-4, Chitin 2338-05-8, Iron citrate 4075-81-4, Calcium propionate 4191-73-5, Isopropyl p-hydroxybenzoate 4247-02-3, Isobutyl p-hydroxybenzoate 4396-19-4 4418-26-2, Sodium dehydroacetate **4468-02-4**, Zinc gluconate 6381-77-7, Sodium erythorbate 7296-64-2, Galactose 7492-55-9, Calcium sorbate 7558-94-3 7632-50-0, Ammonium citrate 7693-13-2, Calcium citrate 7732-18-5, Water, uses 7757-93-9, Calcium monohydrogen phosphate 7758-23-8, Calcium dihydrogen phosphate 7758-87-4, Tricalcium phosphate 8028-98-6, Acetol 9000-07-1, Carrageenan 9000-69-5, Pectinic acid 9002-89-5, Poly(vinyl alcohol) 9004-34-6, Cellulose, uses 9004-61-9, Hyaluronic acid 9005-25-8, Starch, uses 9005-32-7, Alginic acid 9005-49-6, Heparin, uses 9005-79-2, Glycogen, uses 9005-80-5, Inulin 9007-27-6, Chondroitin 9007-28-7, Chondroitinsulfuric acid 9012-72-0, Glucan 9013-95-0, Levan 9014-63-5, Xylan 9034-32-6, Hemicellulose 9036-88-8, Mannan 9037-55-2, Galactan 9037-90-5, Fructan 9041-38-7, Teichoic acid 9050-30-0 9056-36-4, Keratan sulfate 9057-02-7, Pullulan 9060-75-7, L-Arabinan 9072-19-9, Fucoidan 9082-07-9, Sodium chondroitinsulfate 10098-89-2, L-Lysine hydrochloride 10191-41-0, DL-α-Tocopherol 11013-97-1, Methylhesperidin

11138-66-2, Xanthan gum 12619-70-4, Cycloamylose 13656-81-0, 4-Isopropyltropone 14866-19-4, Calcium dihydrogen pyrophosphate 22251-85-0 25013-16-5, Butylhydroxyanisole 25322-68-3 27458-93-1, Isostearyl alcohol 30587-81-6, Dibutylhydroxytoluene 32038-79-2, Ethynol 35660-60-7, Dibenzoylthiamine hydrochloride 36653-82-4, 1-Hexadecanol 37251-79-9, Teichuronic acid 39413-05-3, Isopropyl citrate 39479-63-5, Thiaminelauryl sulfate 50603-32-2, Dihydroxybutyric acid 51222-59-4 53106-52-8, Pentose 55963-73-0, Protuberic acid 65644-56-6, Calcium glycerate 71927-65-6, Heptose 81671-99-0, Thiatetrazole 93780-23-5, Hexose 144314-88-5 162874-49-9, Kadoran 184047-20-9, Octose 184047-21-0, Nonose 184047-22-1, Decose 184047-23-2, Hexos-2-ulose
(environment friendly nontoxic water-soluble **cleaning compns.** for release of polymers from surfaces containing)

L72 ANSWER 36 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:702040 HCAPLUS
DOCUMENT NUMBER: 126:33495
TITLE: Carbonate built non-bleaching laundry detergent composition containing a polymeric polycarboxylate and a zinc salt
INVENTOR(S): Carr, Charles D.
PATENT ASSIGNEE(S): Church and Dwight Co., Inc., USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

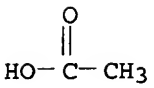
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5574004	A	19961112	US 1994-340064	1994 1115

PRIORITY APPLN. INFO.: US 1994-340064 1994 1115

AB In the title non-bleaching laundry detergent composition, the solids comprises an active surfactant, ≥70% of a water soluble alkaline carbonate, e.g., sodium carbonate, a minor amount of a polymeric polycarboxylate, e.g., an acrylic acid polymer, and a minor amount of elemental zinc in the form of a water soluble salt, e.g., a hydrated or anhydrous zinc sulfate, such as zinc sulfate heptahydrate or monohydrate, based on the total weight of solids in the composition Incorporation of a polymeric polycarboxylate and zinc ions in the foregoing laundry detergent composition containing carbonate ions has the effect of significantly reducing fabric encrustation caused by the precipitation of calcium carbonate.

IT **557-34-6**, Zinc acetate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate **7779-88-6**, Zinc nitrate
(carbonate built non-bleaching **laundry detergent composition** containing a polymeric polycarboxylate and a zinc salt)

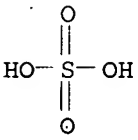
RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

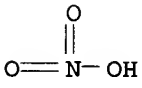
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D003-10
ICS C11D003-04; C11D003-60; C11D017-06
INCL 510361000
CC 46-5 (Surface Active Agents and **Detergents**)
IT 497-19-8, Sodium carbonate, uses 546-46-3, Zinc citrate. **557-34-6**, Zinc acetate 7446-19-7, Zinc sulfate monohydrate 7446-20-0, Zinc sulfate heptahydrate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate **7779-88-6**, Zinc nitrate 9003-01-4D, Acrylic acid homopolymer, neutralized 9003-16-1D, neutralized 25087-26-7D, Methacrylic acid homopolymer, neutralized 25119-64-6D, Itaconic acid homopolymer, neutralized 25322-68-3D, ethers with C12-15 alc. 25751-21-7, Acrylic acid-methacrylic acid copolymer 26099-09-2D, Maleic acid homopolymer, neutralized

28259-96-3D, neutralized 28259-97-4D, neutralized
(carbonate built non-bleaching **laundry detergent composition** containing a polymeric polycarboxylate and a zinc salt)

L72 ANSWER 37 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:855939 HCAPLUS
DOCUMENT NUMBER: 123:260432
TITLE: Stabilized aqueous enzyme solutions, and liquid detergent concentrates containing the enzyme
INVENTOR(S): Zehetmair, Josef K.
PATENT ASSIGNEE(S): Diversey Corp., Can.
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9506101	A1	19950302	WO 1994-CA463	19940825
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2153066	AA	19950302	CA 1994-2153066	19940825
CA 2153066	C	19980210		
AU 9474883	A1	19950321	AU 1994-74883	19940825
AU 686653	B2	19980212		
EP 672100	A1	19950920	EP 1994-924673	19940825
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
ZA 9406535	A	19950403	ZA 1994-6535	19940826
PRIORITY APPLN. INFO.:			US 1993-112681 A	19930826
			WO 1994-CA463 W	19940825

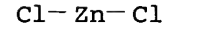
AB The solns. contain water and ≥1 of amylase, protease, and cellulase, and an ionic compound containing a cation other than Ca, B, Mn, Mg, and Zn, and having effective nuclear charge >2.6.

Optionally, the solns. may contain a carboxylic acid and a surfactant. The ionic compound is selected from salts of ≥1 of Sr, Ce, Y, Yb, La. The liquid detergent concs. comprise water 10-70, ionic compound 0.01-2, additive in the form of O-anion source 0.1-4, and nonionic surfactant 8-40 weight%, and protease ≥10 ppm. These compns. inhibit the degradation of the mol. structure of the enzyme.

IT **7646-85-7**, Zinc chloride, uses
(stabilized aqueous enzyme **solns.**, and **liquid detergent** concs. containing the enzyme)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)



IC ICM C11D003-386

CC 46-3 (Surface Active Agents and **Detergents**)

IT 57-55-6, Propyleneglycol, uses 141-53-7, Sodium formate 141-95-7, Sodium malonate 371-47-1, Sodium maleate 537-00-8, Cerium acetate 1314-36-9, Yttria, uses 7439-91-0D, Lanthanum, salts 7440-24-6D, Strontium, salts 7440-45-1D, Cerium, salts 7440-64-4D, Ytterbium, salts 7440-65-5D, Yttrium, salts **7646-85-7**, Zinc chloride, uses 7790-86-5, Cerium chloride 10043-52-4, Calcium chloride, uses 10361-91-8, Ytterbium chloride 10361-92-9, Yttrium chloride 10476-85-4, Strontium chloride 23363-14-6, Yttrium acetate 169314-36-7, Tamol 6-1588
(stabilized aqueous enzyme **solns.**, and **liquid detergent** concs. containing the enzyme)

L72 ANSWER 38 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:789454 HCAPLUS

DOCUMENT NUMBER: 123:173654

TITLE: Cleaning solutions and cleaning therewith for removal of alkali metals adsorbed on semiconductor substrate surface

INVENTOR(S): Nakajima, Kazuji; Okui, Yoshiko

PATENT ASSIGNEE(S): Fujitsu Ltd, Japan; Fujitsu Vlsi Ltd

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07169727	A2	19950704	JP 1993-314599	1993 1215

PRIORITY APPLN. INFO.: JP 1993-314599 1993 1215

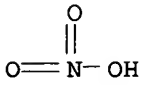
AB The title cleaning solns. contain water and metallic element having higher adsorption effects than alkali metal toward the part being cleaned. Adsorption of alkali metal (e.g., Na) on Si

substrate could be reduced by the presence of Ca, Mg, Al, Fe, Cr, Cu, Mn, Zn, and Ni (as nitrates).

IT **7779-88-6**, Zinc nitrate
(**cleaning solns.** and **cleaning** therewith for removal of alkali metals adsorbed on semiconductor substrate surface)

RN 7779-88-6 HCAPLUS

CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM H01L021-304
ICS C11D007-02

CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 76

IT **7779-88-6**, Zinc nitrate 10124-37-5, Calcium nitrate 10377-60-3, Magnesium nitrate 10377-66-9, Manganese nitrate 10402-29-6, Copper nitrate 13138-45-9, Nickel nitrate 13473-90-0, Aluminum nitrate 13548-38-4, Chromium nitrate 14104-77-9, Iron nitrate
(**cleaning solns.** and **cleaning** therewith for removal of alkali metals adsorbed on semiconductor substrate surface)

L72 ANSWER 39 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:460260 HCAPLUS
DOCUMENT NUMBER: 121:60260
TITLE: Detergent composition showing pH increase upon dilution
INVENTOR(S): Schepers, Frederick Jan
PATENT ASSIGNEE(S): Unilever N. V., Neth.; Unilever PLC
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 588413	A1	19940323	EP 1993-202577	19930902
R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
CA 2105703	AA	19940316	CA 1993-2105703	19930908
PRIORITY APPLN. INFO.:			US 1992-945188 A	19920915

AB The title composition contains a N-containing compound and a salt of Group 1B-8B and/or Group 3A-4A metal. The low pH of the composition before dilution increases the stability of bleaching agents and enzymes during storage. A composition containing water 42.3, Na citrate 6.8, citric acid 2.4, NaOH 3.2, NH3 0.9, decoupling polymer (acrylic) 1.0, Zn acetate 5.2, dodecylbenzenesulfonic acid 26.2, and Neodol 25-9 12.0% showed pH 6.5 and was diluted (1.5 g/L water) to give a solution with pH 8.3.

IT **557-34-6**, Zinc acetate
(**liquid laundry detergents** containing, for pH increase upon dilution)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

●1/2 Zn

IC ICM C11D003-04
ICS C11D003-26; C11D003-39; C11D003-386

CC 46-5 (Surface Active Agents and **Detergents**)

IT **557-34-6**, Zinc acetate 993-02-2, Manganic acetate 7447-39-4, Cupric chloride, uses 7720-78-7, Ferrous sulfate 10028-22-5, Ferric sulfate 10043-01-3, Aluminum sulfate
(**liquid laundry detergents** containing, for pH increase upon dilution)

L72 ANSWER 40 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:561645 HCAPLUS
DOCUMENT NUMBER: 115:161645
TITLE: Deodorizing and cleaning compositions and methods
INVENTOR(S): Hutchings, Richard S.; Haber, Mary K.
PATENT ASSIGNEE(S): Bristol-Myers Squibb Co., USA
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 424845	A2	19910502	EP 1990-120218	1990 1022
EP 424845	A3	19930210		
EP 424845	B1	19970409		
R: DE, FR, GB, IT, SE				
US 5076960	A	19911231	US 1989-425738	1989 1023
CA 2027753	AA	19910424	CA 1990-2027753	

				1990 1016
CA 2027753	C	19970520		
AU 9064873	A1	19910426	AU 1990-64873	1990 1022
AU 637414	B2	19930527		
JP 03176063	A2	19910731	JP 1990-283604	1990 1023
JP 05065189	B4	19930917		
PRIORITY APPLN. INFO.:			US 1989-425738 A	1989 1023

AB Aqueous compns. having pH 4-11 and containing an alkali metal halogenite (especially Na chlorite) and a salt of a transition or post-transition metal are useful for the deodorization of malodorous substrates (e.g., for eliminating smoke, kitchen, and toilet odors) and the cleaning and disinfection of soiled substrates. The compns. contain stabilizer (e.g., Na citrate or iso-PrOH) which inhibit the formation of malodorous ClO2 during storage. A composition contains Na chlorite 0.4, ZnCl2 0.1, iso-PrOH 5, and H2O 94.9%.

IT **7646-85-7**, Zinc chloride, uses and miscellaneous
(deodorizing and **cleaning**-disinfecting **solns**
. containing sodium chlorite and, storage-stable)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D003-395
ICS C11D003-48

CC 46-6 (Surface Active Agents and **Detergents**)

IT 866-82-0, Cupric citrate 7447-39-4, Cupric chloride, uses and miscellaneous 7646-78-8, Stannic chloride, uses and miscellaneous **7646-85-7**, Zinc chloride, uses and miscellaneous 7705-08-0, Ferric chloride, uses and miscellaneous 7758-98-7, Cupric sulfate, uses and miscellaneous 7772-99-8, Stannous chloride, uses and miscellaneous 10025-73-7, Chromium chloride (CrCl3) 15593-15-4, Copper chloride (CuCl3)
(deodorizing and **cleaning**-disinfecting **solns**
. containing sodium chlorite and, storage-stable)

L72 ANSWER 41 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

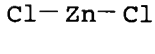
ACCESSION NUMBER:	1991:452324 HCAPLUS
DOCUMENT NUMBER:	115:52324
TITLE:	Liquid detergent compositions for hard surfaces
INVENTOR(S):	Kakiuchi, Hidesuke; Ishii, Makoto; Ikoma, Kyoko; Nakae, Tokuo
PATENT ASSIGNEE(S):	Kao Corp., Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 4 pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03079700	A2	19910404	JP 1989-215737	19890822
JP 07056038	B4	19950614		
PRIORITY APPLN. INFO.:			JP 1989-215737	19890822

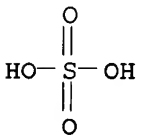
AB The title compns. (pH 4-12) safe to plastics under stress contain poloxyalkylene surfactants and/or monohydroxy or polyhydroxy alc. (derivative) solvents, and 0.1-5% water-soluble inorg. metal salt(s) chosen from alkaline earth metal, Al, and Zn halides and ZnSO4. An ABS piece adhered on a PVC pipe (with 0.74% strain) showed no cracks after it was soaked in an aqueous solution containing 1% polyoxyalkylene alkyl ether and 2% MgCl2, wiped with a tissue paper, and left at 20° and 65% relative humidity for 24 h.

IT **7646-85-7**, Zinc chloride, uses and miscellaneous
7733-02-0, Zinc sulfate
(**liquid detergents** containing, for ABS resins)

RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)



RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



IC ICM C11D003-04
ICS C11D001-68; C11D001-72

CC 46-6 (Surface Active Agents and **Detergents**)

IT 7446-70-0, Aluminum chloride, uses and miscellaneous
7646-85-7, Zinc chloride, uses and miscellaneous
7733-02-0, Zinc sulfate 7786-30-3, Magnesium chloride, uses and miscellaneous 10043-52-4, Calcium chloride, uses and miscellaneous
(**liquid detergents** containing, for ABS resins)

L72 ANSWER 42 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:499918 HCAPLUS
DOCUMENT NUMBER: 113:99918
TITLE: Noncorrosive alkaline **cleaning compositions** for aluminum utensils

INVENTOR(S): Corring, Robert John; Lamberti, Vincent; Aronson, Michael Paul
PATENT ASSIGNEE(S): Unilever PLC, UK
SOURCE: Brit. UK Pat. Appl., 26 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

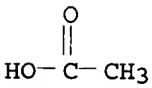
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2224286	A1	19900502	GB 1989-22356	19891004
GB 2224286	B2	19920122		
US 4992212	A	19910212	US 1988-259072	19881018
CA 2000536	AA	19900418	CA 1989-2000536	19891012
CA 2000536	C	19960702		

PRIORITY APPLN. INFO.: US 1988-259072 A 19881018

OTHER SOURCE(S): MARPAT 113:99918

AB The title compns. contain H2O, 1-10% base, 0.1-4% Zn salt, 0.1-10% complexing agent, and 0.2-30% anionic surfactant and have pH 9-11. An aqueous mixture of 3.75% hydrogenated glucose syrup, 9.0% Na xylenesulfonate, 3.5% ethanolamine alkylbenzenesulfonate, 14.0% Na alkylbenzenesulfonate, 12% Neodol 23-3 S, 4.0% lauric-myristic ethanolamide, 2.0% ethanolamine, 3% Zn(OAc)2, and 1 mol citrate salt/mol Zn, when diluted to 1%, did not atain an Al tile in 30 min contact; vs. heavy staining without Zn(OAc)2 and citrate.

IT **557-34-6**, Zinc acetate
(in noncorrosive, alkaline cleaners for aluminum utensils)
RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC ICM C11D003-60
CC 46-6 (Surface Active Agents and **Detergents**)
ST cleaner aluminum corrosion inhibitor; zinc salt cleaner aluminum; citrate cleaner aluminum noncorrosive; **dishwashing** detergent aluminum noncorrosive
IT Corrosion inhibitors
(for alkaline **cleaning compns.** for aluminum utensils)

IT **Detergents**
(**dishwashing, liquid**, for aluminum utensils, corrosion inhibitors for)
IT 52-90-4, L-Cysteine, uses and miscellaneous 56-40-6, Glycine, uses and miscellaneous 56-87-1, L-Lysine, uses and miscellaneous 60-00-4, EDTA, uses and miscellaneous 72-19-5, L-Threonine, uses and miscellaneous 74-79-3, L-Arginine, uses and miscellaneous 77-92-9, uses and miscellaneous 95-14-7, 1H-Benzotriazole 139-13-9, Nitrilotriacetic acid 141-43-5, uses and miscellaneous 147-85-3, Proline, uses and miscellaneous 302-84-1, DL-Serine **557-34-6**, Zinc acetate 994-36-5, Sodium citrate 6419-19-8 7408-18-6, Oxydisuccinic acid 15827-60-8 38945-27-6, (Carboxymethoxy)succinic acid
(in noncorrosive, alkaline cleaners for aluminum utensils)

L72 ANSWER 43 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:156603 HCAPLUS
DOCUMENT NUMBER: 110:156603
TITLE: **Liquid** thixotropic machine **dishwashing composition** containing a structuring system
INVENTOR(S): Elliott, David Leroy; Christiano, Steven Patrick; Lang, David John; Sisco, Rosemary Margaret
PATENT ASSIGNEE(S): Unilever PLC, UK; Unilever N. V.
SOURCE: Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 295093	A1	19881214	EP 1988-305256	1988 0609
EP 295093	B1	19910605		
R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
US 4954280	A	19900904	US 1988-202087	1988 0602
CA 1315640	A1	19930406	CA 1988-569046	1988 0609
AU 8817619	A1	19881215	AU 1988-17619	1988 0610
AU 596310	B2	19900426		
JP 01004699	A2	19890109	JP 1988-143449	1988 0610
ZA 8804170	A	19900228	ZA 1988-4170	1988 0610
BR 8802888	A	19890103	BR 1988-2888	1988 0613

PRIORITY APPLN. INFO.: US 1987-62521 A

1987
0612

US 1988-161228 B2
1988
0217

AB The title composition contains a source of available Cl, sufficient alkali to give pH ≥10.5, a builder, and a thickening system comprising a synthetic water-soluble polymer, a swellable clay, and multivalent cations. The composition is prepared by mixing the thickening system with water, adding the builder, cooling the slurry, and adding the source of available Cl. The composition is pourable by squeezing or shaking the storage container and is effectively retained in dispensing cups of **dishwashers** during cycles preceding the wash cycle. A composition contained Gelwhite GP 2.0, Acrysol A-3 2.0, NaOH 1.2, Al2(SO4)3.18H2O 0.2, Na5P3O10 21.36, Na2CO3 7.0, and Na silicate (2.4:1 SiO2-Na2O) 6.46%, the balance being NaOCl (to give 1.0% available Cl) and water.

IT **7646-85-7**, Zinc chloride, uses and miscellaneous
(thixotropic **liquid detergents** containing, for machine **dishwashing**)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC ICM C11D003-395
ICS C11D003-12; C11D007-10; C11D007-60

CC 46-6 (Surface Active Agents and **Detergents**)

ST thixotropy **liq detergent dishwasher**; thickener **liq detergent dishwasher**; polyacrylate thixotropy detergent; clay thixotropy detergent; aluminum sulfate thixotropy detergent

IT Thickening agents
(clay-polymer-metal salt, in **liquid detergents** for machine **dishwashing**)

IT Bleaching agents
(hypochlorite, **liquid detergents** containing, for machine **dishwashing**)

IT Bentonite, uses and miscellaneous
(thixotropic **liquid detergents** containing, for machine **dishwashing**)

IT Thixotropy
(agents, **liquid detergents** containing, for machine **dishwashing**)

IT **Detergents**
(**dishwashing**, **liquid**, thixotropic agents for, for machine use)

IT Carboxylic acids, polymers
(polymers, thixotropic **liquid detergents** containing, for machine **dishwashing**)

IT 1318-93-0, Montmorillonite ((Al1.33-1.67Mg0.33-0.67)(Ca0-1Na0-1)0.33Si4(OH)2O10.xH2O), uses and miscellaneous 7446-70-0, Aluminum chloride, uses and miscellaneous 7646-78-8, Stannic chloride, uses and miscellaneous **7646-85-7**, Zinc chloride, uses and miscellaneous 7789-45-9, Cupric bromide

9003-01-4, Poly(acrylic acid) 9003-04-7 10043-01-3, Aluminum sulfate 10101-53-8 25087-26-7, Poly(methacrylic acid) 26099-09-2, Poly(maleic acid)
(thixotropic **liquid detergents** containing, for machine **dishwashing**)

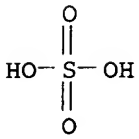
L72 ANSWER 44 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:156592 HCAPLUS
DOCUMENT NUMBER: 110:156592
TITLE: Method of cleaning and conditioning marble and similar surfaces
INVENTOR(S): Thrower, John H.
PATENT ASSIGNEE(S): USA
SOURCE: Eur. Pat. Appl., 4 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 290132	A1	19881109	EP 1988-302768	1988 0329
R: CH, DE, ES, FR, GB, IT, LI				
JP 64003087	A2	19890106	JP 1988-71717	1988 0325
PRIORITY APPLN. INFO.:			US 1987-46762 A	1987 0507

AB Polished marble surfaces, e.g., floors, that have becomed defaced and scratched are buffed with a $ZnSO_4$ solution containing an abrasive and a thickener, flushed with water, and buffed (i.e., with a buffer providing a surface pressure of 0.5-1 psi) with an aqueous composition containing Zn and/or alkaline earth metal fluorosilicates and an aliphatic monocarboxylic acid such as AcOH with partial removal of the composition, giving a surface which contains a thin film of Ca fluorosilicate and has a brilliant glasslike finish. The film is more durable than polymer or wax coatings and does not require stripping at a later time.

IT **7733-02-0**, Zinc sulfate
(**cleaning compns.** containing, for marble floors)

RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



IC ICM C04B041-50
ICS C04B041-53
CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 42
IT **7733-02-0**, Zinc sulfate
(**cleaning compns.** containing, for marble floors)

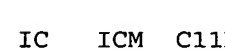
L72 ANSWER 45 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:499607 HCAPLUS
DOCUMENT NUMBER: 105:99607
TITLE: Automatic **dishwasher detergent composition**
INVENTOR(S): Hartman, Frederick Anthony; Piatt, David Michael
PATENT ASSIGNEE(S): Procter and Gamble Co., USA
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 186234	A2	19860702	EP 1985-202020	1985 1205
EP 186234	A3	19870415		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
CA 1278235	A1	19901227	CA 1985-497739	1985 1216

PRIORITY APPLN. INFO.: US 1984-682387 A 1984 1217

AB A low-sudsing detergent for use in automatic **dishwashers** comprises ≥1 detergency builder, Cl bleach, low-foaming nonionic surfactant, ≥1 alkyl phosphate ester, and a material capable of generating bromide ions. The bromide ions improve the starch removal performance, decreasing the amount of pretreatment necessary for effective cleaning. Thus, a granular detergent comprising nonionic surfactant 4, Na5P3O10 33, Na2CO3 20, Na dichloroisocyanurate (1.48% available Cl) 2.5, Na2SO4 16, Na silicate 10, monostearyl acid phosphate 0.2, and NaBr 2.5%, the balance being water and additives, had better cleaning power than

a similar detergent containing no NaBr.
IT **7699-45-8**
(detergents containing, for cleaning power in **dishwashers**
)
RN 7699-45-8 HCAPLUS
CN Zinc bromide (ZnBr2) (9CI) (CA INDEX NAME)



IC ICM C11D003-395
ICS C11D001-83; C11D003-04
CC 46-6 (Surface Active Agents and **Detergents**)
ST bromide detergent **dishwashing** efficiency; starch removal bromide **dishwashing**; sodium bromide detergent **dishwashing**
IT Detergents
(**dishwashing**, for machine use, bromide ions for improved cleaning by)
IT 79-15-2 7647-15-6, uses and miscellaneous **7699-45-8**
7787-70-4 7789-41-5
(detergents containing, for cleaning power in **dishwashers**
)

L72 ANSWER 46 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:226774 HCAPLUS
DOCUMENT NUMBER: 104:226774
TITLE: Scale-removing detergent compositions
INVENTOR(S): Uno, Satoru
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61034098	A2	19860218	JP 1984-137817	19840703

PRIORITY APPLN. INFO.: JP 1984-137817 19840703

AB The title compns., which remove silica scale and Ca scale, comprise a B compound, a solution of a F compound, and an inorg. acid. Thus, a mixture of H3BO3 3, HCl 250, and 35% ammonium bifluoride solution 50 g disolved 2g silica-Ca scale completely during 5-30 min.
IT **1332-07-6**
(scale-removing **cleaning solns.** containing)
RN 1332-07-6 HCAPLUS
CN Boric acid, zinc salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM C11D007-04
ICS C23G001-00; F28G009-00

CC 46-6 (Surface Active Agents and **Detergents**)
Section cross-reference(s): 61
IT 1303-95-3 1330-43-4 **1332-07-6** 1332-77-0 1341-49-7
7632-04-4 7647-01-0, uses and miscellaneous 10043-35-3, uses and miscellaneous 12007-56-6 12007-60-2 13703-82-7
(scale-removing **cleaning solns.** containing)

L72 ANSWER 47 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1985:8651 HCAPLUS
DOCUMENT NUMBER: 102:8651
TITLE: Cleaning of a polyamide-soiled equipment
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59102998	A2	19840614	JP 1982-212619	1982 1206

PRIORITY APPLN. INFO.: JP 1982-212619 1982 1206

AB An equipment is contacted with a cleaning solution containing ≥1 compound selected from polyhydric alcs. and ethanolamines and ≥1 compd selected from Zn compds. and Sn compds. The method is effective and not harmful to the equipment. Thus, a measuring pump soiled with nylon 6 [25038-54-4] was washed with a cleaning composition comprising 100 parts diethylene glycol [111-46-6] and 3 parts ZnCl2 and further washed with water, ultrasonic waves, and water (repeated twice).
IT **7646-85-7**, uses and miscellaneous
(**cleaning compns.** containing, for removal of nylon wastes)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC C11D007-52; B08B003-08; D01D004-04; D01F006-60
CC 46-6 (Surface Active Agents and **Detergents**)
IT 102-71-6, uses and miscellaneous 111-46-6, uses and miscellaneous 112-27-6 **7646-85-7**, uses and miscellaneous
(**cleaning compns.** containing, for removal of nylon wastes)

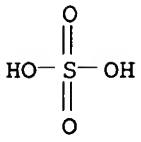
L72 ANSWER 48 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:145480 HCAPLUS
DOCUMENT NUMBER: 98:145480
TITLE: Viscous compositions containing amido betaines and salts

INVENTOR(S): Rubin, Fred K.; Van Blarcom, David
PATENT ASSIGNEE(S): Lever Brothers Co., USA
SOURCE: U.S., 14 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4375421	A	19830301	US 1981-312439	1981 1019
CA 1186966	A1	19850514	CA 1982-413413	1982 1014
AU 8289408	A1	19830428	AU 1982-89408	1982 1015
AU 550577	B2	19860327		
NO 8203457	A	19830420	NO 1982-3457	1982 1018
EP 77674	A2	19830427	EP 1982-305526	1982 1018
EP 77674	A3	19851218		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
JP 58079099	A2	19830512	JP 1982-182695	1982 1018
JP 59052198	B4	19841218		
BR 8206061	A	19830913	BR 1982-6061	1982 1018
ZA 8207602	A	19840530	ZA 1982-7602	1982 1018
PRIORITY APPLN. INFO.:			US 1981-312439 A	1981 1019

AB Amido betaines RCONH(CH2)nN+R1R2CH2CO2- (R = C9-17 alkyl or alkenyl, n = 2-4, R1 and R2 = C1-4 alkyl), water, ≥1 water-soluble inorg. or organic salt, and, in some cases, ≥1 micelle-forming anionic surfactant are used to prepare viscous liqs., pastes, or gels for use in cleansing, toiletry, cosmetic, and other applications. Thus, a gel (viscosity 44000 cP) comprising coconut alkanamido betaine 15, NaHSO4 20, and water 65% was useful as a toilet boil cleaner.

IT **7733-02-0**
(thickeners, for aqueous amido betaine compns.)
RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC C11D001-90; C11D001-94; C11D003-04; C11D017-08
INCL 252110000
CC 46-6 (Surface Active Agents and **Detergents**)
IT **Detergents**
(**cleaning compns.**, amido betaine-containing solns., thickeners for)
IT Detergents
(**dishwashing**, amido betaine-containing solns., thickeners for)
IT 68-04-2 127-08-2 127-09-3 150-90-3 151-21-3, uses and miscellaneous 497-19-8, uses and miscellaneous 533-96-0 584-08-7 866-84-2 868-18-8 2235-54-3 3097-08-3 5064-31-3 7320-34-5 7487-88-9, uses and miscellaneous 7681-38-1 7722-88-5 **7733-02-0** 7757-82-6, uses and miscellaneous 7758-29-4 7758-98-7, uses and miscellaneous 7772-98-7 7778-80-5, uses and miscellaneous 7783-20-2, uses and miscellaneous 9004-82-4 10043-01-3 10043-67-1 10294-26-5 25155-30-0 27323-41-7 32612-48-9 34128-01-3 37340-60-6 62755-21-9
(thickeners, for aqueous amido betaine compns.)

L72 ANSWER 49 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1978:107133 HCAPLUS
DOCUMENT NUMBER: 88:107133
TITLE: Method and composition for cleaning polished surfaces
INVENTOR(S): Hindle, Peter; Welsh, William James
PATENT ASSIGNEE(S): Procter and Gamble Co., USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4069066	A	19780117	US 1976-739159	1976 1110
DE 2749623	A1	19780511	DE 1977-2749623	1977 1105
FR 2370790	A1	19780609	FR 1977-33818	1977 1109
CA 1086600	A1	19800930	CA 1977-290515	

GB 1587316	A	19810401	GB 1977-46631	1977 1109	
PRIORITY APPLN. INFO.:			US 1976-739159	A 1977 1109	
				A 1976 1110	

AB Cleaning compns. are described which contain an amine-derived surfactant, amine impurities introduced with the surfactant, and a water-soluble salt of a metal ion, such as a Zn, Co, or Ni ion, capable of complexing with the amine impurities. The compns. are useful for cleaning the surfaces of hardened coatings of floor polishes containing polyvalent metal ion-crosslinked copolymers of acrylic monomers containing carboxy groups, i.e., the metal salt forms complex with the amine impurities and prevent softening of the crosslinked polish coatings by the amine impurities. Thus, a cleaning composition contained cetyltrimethylammonium bromide 3, 3-(N-C12.8 alkyl-N,N-dimethylammonio)-2-hydroxy-1-propanesulfonate 1.6, ethoxylated (9 mols) C11-15 secondary alcs. 1, perfume 0.5, ZnCl2 0.005, and water 93.895%.

IT **7646-85-7**, uses and miscellaneous
(**cleaning compns.** containing amine-derived surfactants and, for cleaning floor polish coatings without softening)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IC B08B003-08

INCL 134006000

CC 46-6 (Surface Active Agents and **Detergents**)

IT **7646-85-7**, uses and miscellaneous
(**cleaning compns.** containing amine-derived surfactants and, for cleaning floor polish coatings without softening)

L72 ANSWER 50 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1975:581449 HCAPLUS

DOCUMENT NUMBER: 83:181449

TITLE: Color-changeable detergent composition

INVENTOR(S): Kobayashi, Takehiko

PATENT ASSIGNEE(S): Japan

SOURCE: Jpn. Tokkyo Koho, 2 pp.
CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50018482	B4	19750630	JP 1969-37413	1969 0516

PRIORITY APPLN. INFO.: JP 1969-37413 1969 0516

AB Detergent powders were prepared which contain a metal salt and another component which reacted in water to give colored washing solns. The salt, the other component, or both were coated with a water-resistant material. Thus, 0.3 g zincon [135-52-4] in EtOH was adsorbed on powdered silica, EtOH was evaporated, and the particles were coated with 2 g polyethylene glycol and **mixed** with **detergent** powder and ZnCl2 [**7646-85-7**] to prepare a powder which gave a blue washing solution at pH 5-10.

IC C11D

CC 46-1 (Surface Active Agents and **Detergents**)

L72 ANSWER 51 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1975:430336 HCAPLUS

DOCUMENT NUMBER: 83:30336

TITLE: Washing composition

INVENTOR(S): Dekker, Bob; Winton Murray, Mathew

PATENT ASSIGNEE(S): Procter and Gamble European Technical Center, Belg.

SOURCE: Ger. Offen., 29 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

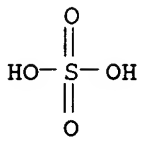
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2445710	A1	19750410	DE 1974-2445710	1974 0925
NL 7413220	A	19750411	NL 1974-13220	1974 1008
FR 2246630	A1	19750502	FR 1974-33824	1974 1008
GB 1438417	A	19760609	GB 1974-43523	1974 1008
BE 820862	A2	19750409	BE 1974-149353	1974 1009
PRIORITY APPLN. INFO.:			LU 1973-68583 A	1973 1009

AB Detergents for washing glass, **dishes**, etc. were prepared which contained C16H33O2CCH(CO2Na)CH(PO3Na2)CO2C16H33 (I) [55525-37-6], (NaO2CCH2)2(NaO3S)CC(O)CH(CH2CO2Na)CH2CO2C12H25 [55525-38-7], or H(OC2H4)6O2CCH2C(CO2Na)(SO3Na)CH2CO2Na [55525-39-8] and SnCl2 [7772-99-8], ZnSO4 [**7733-02-0**], or KAl(SO4)2 [10043-67-1]. Thus, a detergent comprised Na C12-14 alkanesulfonate 8, R(OC2H4)3SO4Na (R = C12-16 alkyl) 4, ditallowdimethylamine oxide 4, SnCl2 0.3, I 12, Na citrate 4, Na cumenesulfonate 8, and water 59%.

IT **7733-02-0**
(detergents containing, for glass and **dishes**)
RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC C11D
CC 46-6 (Surface Active Agents and **Detergents**)
ST detergent glass **dishwashing**; carboxylate detergent **dishwashing**; phosphonate carboxylate detergent **dishwashing**; sulfocarboxylate detergent **dishwashing**; metal salt detergent **dishwashing**
IT Glass
(**cleaning compns.** for)
IT Detergents
(for glass and **dishes**)
IT **7733-02-0** 7772-99-8 10043-67-1 55525-37-6 55525-38-7 55525-39-8
(detergents containing, for glass and **dishes**)

L72 ANSWER 52 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:407185 HCAPLUS
DOCUMENT NUMBER: 79:7185
TITLE: Alkaline cleaning compositions for flame-exposed boiler surfaces
INVENTOR(S): Moyer, Hans
PATENT ASSIGNEE(S): Meyer, Hans, Waerme- und Wassertechnische Analgen
SOURCE: Ger., 3 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2234172	B1	19730426	DE 1972-2234172	1972 0712
DE 2234172	C2	19750327		
US 3910854	A	19751007	US 1973-376675	1973 0705
AT 323503	B	19750710	AT 1973-6113	1973 0711

PRIORITY APPLN. INFO.: DE 1972-2234172 A

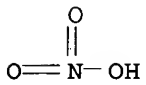
1972
0712

AB Improved title compns. based on NaOH or KOH and Na or K metasilicates contained 3% zinc nitrate [7779-88-6] and 5% aqueous (25%) ammonium hydroxide [1336-21-6].

IT **7779-88-6**
(**cleaning compns.**, containing, for boilers, for corrosion prevention)

RN 7779-88-6 HCAPLUS

CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC C23G

CC 46-6 (Surface Active Agents and **Detergents**)

IT **7779-88-6**
(**cleaning compns.**, containing, for boilers, for corrosion prevention)

L72 ANSWER 53 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1972:115233 HCAPLUS

DOCUMENT NUMBER: 76:115233

TITLE: Bleaching, sterilizing, disinfecting, and deterging compositions

INVENTOR(S): King, Thomas M.

PATENT ASSIGNEE(S): Monsanto Co.

SOURCE: U.S., 8 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

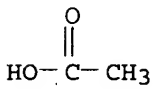
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3629124	A	19711221	US 1969-853512	1969 0827

PRIORITY APPLN. INFO.: US 1969-853512 A 1969 0827

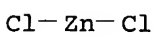
AB Threshold-sequestering capabilities were imparted to a Cl-releasing agent, e.g. sodium hypochlorite [7681-52-9], by addition of an amino phosphonic acid, e.g. [nitrilotris(methylene)]triphosphonic acid [6419-19-8]. A stabilizer, e.g. zinc sulfate [**7733-02-0**], was added to prevent chemical interaction between the Cl compound and the acid. The compns. were used in household bleaching, sterilizing, disinfecting, and **cleansing compns.**

IT **557-34-6 7646-85-7**, uses and miscellaneous
7733-02-0 7779-88-6
(stabilizers, for bleaching agent-sequestering agent-containing **detergent compns.**)
RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

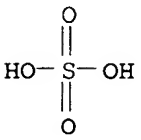


●1/2 Zn

RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

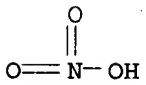


RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IC C11D
INCL 252099000
CC 46 (Surface Active Agents and **Detergents**)
IT 139-12-8 **557-34-6** 3251-23-8 7447-39-4, uses and miscellaneous **7646-85-7**, uses and miscellaneous
7733-02-0 7779-88-6 10124-36-4 13473-90-0
(stabilizers, for bleaching agent-sequestering agent-containing **detergent compns.**)